

No. 15540

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United States  
Court of Appeals  
for the Ninth Circuit

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C. MARTIN WELCH,

Appellant.

vs.

EUGENE L. GRINDLE,

Appellee.

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Transcript of Record  
(In Three Volumes)

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Volume II  
(Pages 365 to 716)

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Appeal from the United States District Court for the  
Northern District of California.  
Southern Division.

FILED

JUL 18 1957

PAUL P. O'BRIEN, C.



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Morning Session, Tuesday, Feb. 28, 1956

The Clerk: Eugene Grindle versus C. Martin Welch, further trial.

Mr. Hohbach: Your Honor will remember that yesterday we moved to amend the complaint to conform to the evidence in accordance with Rule 15(b) of the Federal Rules of Civil Procedure. We have prepared such a motion and complaint together with a short memorandum of points and authorities and I would offer you the original copy at this time.

The Court: Do you have a copy of this, Mr. Naylor?

Mr. Naylor: Yes, I have been served with a copy. I haven't had a chance to examine it, however. I would like to see exactly the extent to which it goes before stating a desire to object or making any comment.

Mr. Hohbach: I have a few comments to make.

Mr. Naylor: I am not disposed to object to such an amendment but I would like an opportunity to check it, however.

The Court: Very well. [349]

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Mr. Naylor: Yes. And you are offering a formal motion to amend at this moment?

Mr. Hohbach: That is right; I would like to again make the motion to amend our complaint to conform to the evidence in accordance with Rule 15(b).

The Court: I will take the motion to amend the

complaint under advisement until such time as Mr. Naylor has a chance to object.

Mr. Hohbach: And I also wish to point out that the amendments which we have made in paragraphs 5 and 8 are supported by the evidence which has been presented so far in this case. [350]

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Mr. Naylor: Is it your Honor's disposition that we put our witness, Mr. Kerr, on at this time?

The Court: Yes, if you are prepared to go forward now.

Mr. Naylor: This of course is without prejudice to the motions we have made?

The Court: Yes.

Mr. Naylor: Mr. Kerr.

### THEODORE W. KERR

called as a witness on behalf of the defendant; sworn.

The Clerk: Please state your name and occupation for the record.

A. Theodore Wallace Kerr. I am a partner in Kerr Industries, self-employed.

### Direct Examination

By Mr. Naylor:

Q. You say you are a partner in Kerr Industries, Mr. Kerr? A. That is right, sir. [351]

Q. Where is Kerr Industries located?

A. 105 Spazier Avenue, Burbank, California.

Q. With what is Kerr Industries concerned? What is the nature of that business?

(Testimony of Theodore W. Kerr.)

A. Well, it is exclusively a custom extrusion—plastic custom extrusion business.

Q. And how long have you been connected with Kerr Industries?      A. Almost four years.

Q. What did you do prior to that time?

A. Prior to that I was vice-president of Plastic Process Company.

Q. And they were located where?

A. They are located in Los Angeles.

Q. And for what period of time were you connected with Plastic Process Company?

A. Approximately eight years.

Q. Could you state the period of that connection in terms of years—year dates?

A. Well, the full time year dates were from 1944 until 1952.

Q. Would you please tell the Court something about the nature of the business of Plastic Process Company?

A. Well, the business was one of custom extruding plastic rods, tubes, sheets, monofilaments and various types of decorative molding.

Q. And was that true of the business throughout the period [352] of your connection with it?

A. Yes, that is true.

Q. Are you acquainted with Mr. C. Martin Welch?      A. Yes, I am.

Q. How long have you known Mr. Welch?

A. Approximately ten years.

Q. And that would be commencing in 1946, would it?      A. I think it goes back to '45.

(Testimony of Theodore W. Kerr.)

Q. Did Mr. Welch have any connection or relations with Plastic Process Company during the period of your connection with it?

A. Yes, he was the San Francisco representative of Plastic Process Company.

Q. Will you tell us something about the nature of his position as a representative?

A. Well, his position was one of securing business in the San Francisco area for Plastic Process Company of Los Angeles.

Q. Was he a salaried employee of Plastic Process Company or did he have some other arrangement?

A. He was not a salaried employee.

Q. He was not a salaried employee?

A. That's right.

Q. Do you recall having anything to do with a plastic dispstick?      A. Yes, I do. [353]

Q. When did you first have any contact with a plastic dipstick?

A. Well, my recollection is in 1948.

Q. In 1948. Will you state the approximate time when that occurred?

A. I could only say early in the year.

Q. Early in the year 1948. Do you recall how you first had any contact at all with the matter of a plastic dipstick?

A. Well, of course my recollection was that Mr. Welch ran onto an item that had possibilities as a plastic extrusion.

Q. And how did you learn of that, Mr. Kerr?

(Testimony of Theodore W. Kerr.)

A. As I recall, it was through a letter sent to me by Mr. Welch.

Q. I will show you what purports to be a copy of a communication dated May 3, 1948, and will ask you to examine that and identify it if you can.

A. Well, this is the letter.

Q. Is that the letter?           A. That's right.

Q. I would like to ask you in that connection something about your mode of communicating with Mr. Welch during the period that he was San Francisco representative for Plastic Process Company. What kind of stationery was used?

A. Regular company stationery.

Q. And did it correspond to this sheet of paper that I have [354] handed you dated May 3, 1948, in appearance?

A. Well, that was quite commonplace, this type that he has sent down here. We have many copies on file of a similar nature.

Q. And what about your correspondence, if any, with Mr. Welch? How would that appear in relation to this particular sheet?

A. Well, that would appear on a regular form of stationery with a Plastic Process Company heading on it.

Q. I see. Now do you recall receiving a letter such as the May 3, 1948, communication from Mr. Welch?           A. Very definitely, yes.

Q. Do you have the original in your personal possession?           A. No, I don't.

Q. I would like to ask you to examine this May

(Testimony of Theodore W. Kerr.)

3, 1948, communication and point out to the Court wherein there is any reference in it, if there is, to a plastic dipstick problem.

A. Well, the whole letter refers to a plastic dipstick problem. Well, first off it described a stick and a sketch has been made in the letter of a proposed design and a quantity has been suggested here for both an initial order and a possibility of more being used in the future. And of course it explains quite clearly the reason for the dipstick being such as it is.

Q. I would like to ask you if this particular communication [355] or the original of it was addressed to you or someone else in Plastic Process Company.

A. Well, it was actually addressed to the vice-president in charge of sales because the—well, I would say his responsibility was sales and Mr. Martin's responsibility was likewise sales, so their two contacts naturally overlap.

Q. Is that person identified in the communication?      A. Yes, he is.

Q. And his name?      A. Harry Wenk.

Q. What were your duties in Plastic Process Company in relation to Mr. Wenk's duties as you have described them?

A. Well, my duties were of course to take the problems that were presented to Mr. Wenk and transmit those into production for decisions against producing them.

Q. Now you state there is a reference in this



(Testimony of Theodore W. Kerr.)

communication—which I think, incidentally, your Honor, I might identify at this time so there will be some continuity in the record. May that be received as defendant's next in order, please?

The Court: So ordered.

The Clerk: Defendant's Exhibit E.

(Whereupon, letter of May 3, 1948, referred to above, was received in evidence and marked Defendant's Exhibit E.)

Q. (By Mr. Naylor): Mr. Kerr, will you examine Defendant's [356] Exhibit E and point out wherein there is any reference to a sketch such as you mentioned.

A. "An alternate design which may work o.k. and save materials such as—would perhaps be better."

Q. That occurs in the middle of the letter?

A. That's right.

Mr. Naylor: I have an extra copy in case your Honor wishes to follow it.

The Court: Thank you.

Q. (By Mr. Naylor): In connection with the statement that you have just read about an alternate design, was there an actual sketch made in the body of the letter?

A. Yes, there is.

Q. And does it appear on that copy?

A. Yes, there is.

Q. Now elsewhere in the communication, Defendant's Exhibit E, will you state whether or not there

(Testimony of Theodore W. Kerr.)

is any reference to a drawing accompanying that communication?

A. Somehow or another I have lost the continuity of this in your last question.

Q. Well, will you start at the beginning of the letter and read straight through? A. Oh, yes.

Q. And see if there is any reference to a drawing? A. That is in the first sentence. [357]

Q. What does it say, Mr. Kerr?

A. "The enclosed drawing is a section of a fuel measuring stick, sample of which is being mailed you today by Pan American."

Q. In connection with the drawing I would like to show you what purports to be a print of a drawing and will ask if you can identify that.

A. Well, I would say yes, this is the drawing.

Q. That accompanied the letter?

A. That's it.

Q. Defendant's Exhibit E?

A. That's right.

Mr. Naylor: We will offer that as defendant's next in order, if your Honor please.

The Court: It will be received and marked.

The Clerk: Defendant's Exhibit F in evidence.

(Whereupon, the drawing referred to above was received in evidence and marked Defendant's Exhibit F.)

Q. (By Mr. Naylor): Now, Mr. Kerr, if you will examine Defendant's Exhibit F. Will you state



(Testimony of Theodore W. Kerr.)

what was your understanding of the proposed structure that was depicted in that sketch or print?

A. Well, the proposed structure here is a single tubular extrusion with four—five orifices.

Q. Will you locate the orifices, please, by reference to [358] this sketch?

A. Well, there is one orifice in the center and one in each of the four flat side welds.

Q. And the relative size?

A. The size of the orifices?

Q. Orifices.

A. Well, the size of the orifices on the side would be about equivalent to a  $\frac{1}{8}$ th inch hole, and the one in the center approximately a half inch hole.

Q. And was that the interpretation you placed upon the drawing in 1948 when you first saw it?

A. That's right.

Q. Now if you will examine Defendant's Exhibit E again, I would like to point out wherein reference was made to a sample. I think you mentioned that as you referred to the drawing. What is said about a sample?

A. "A sample of which is being mailed you today by Pan American."

Q. Now, I would like to ask you, do you recall having received such a sample?

A. Yes, I do.

Q. Will you describe for the Court the construction and appearance of the sample that you so received?

(Testimony of Theodore W. Kerr.)

A. Well, the sample that I received consisted of eight pieces of acrylate sheet stock that had been fabricated and [359] cemented together to form a square tube—essentially a square tube with four orifices and containing a wooden stick in the main body of the center.

Q. Mr. Kerr, if I were to give you a sheet of paper could you sketch the layout of the several pieces of that particular sample as you recall it?

A. Yes, I can.

Q. Will you please do so. And may I ask the Court's permission for the witness to use a corner of the desk for that purpose?

The Court: He may.

A. (The witness drew on a piece of paper and handed it to Mr. Naylor.)

Q. (By Mr. Naylor): Returning to the sketch—incidentally, Mr. Kerr, would you mind noting your name and today's date on that sheet so that it will be readily identifiable?

A. April 28th?

Mr. Naylor: April 28th.

The Court: February.

Mr. Naylor: Pardon me; February. I had the sketch date in mind; I'm sorry.

I will offer that as defendant's next in order, if the Court please.

The Court: It will be received.

The Clerk: Defendant's Exhibit G in [360] evidence.

(Whereupon sketch referred to above was received in evidence and marked Defendant's Exhibit G.)

(Testimony of Theodore W. Kerr.)

Q. (By Mr. Naylor): Coming again to Defendant's Exhibit G, I wonder if you would be good enough to put some identifying references or numerals on that sketch in order to characterize it as you recall it. For example, will you put the reference numeral A on any section of the outer shell of the device? A. (Witness wrote on the sketch.)

Q. And then continuing around—I assume there are four sides? A. That's right.

Q. Continuing around the structure will you put the reference numerals B, C, D to denote the opposite sides?

A. (The witness wrote on the sketch.)

Q. That is the shell of the structure, is it, Mr. Kerr? A. That's right.

Q. Looking at the structure you have thus sketched, would you say there was an inner shell?

A. Yes.

Q. And of how many component parts does that consist? A. Four parts.

Q. Starting with the letter E, will you successively denote the four parts of the inner shell?

A. I have done it. [361]

Q. You have now denoted the eight pieces of which you spoke? A. That's right, sir.

Q. Now, Mr. Kerr, I notice some wavy lines or crosshatch lines in the center of the object which you have described and sketched. What is that intended to denote?

A. Well, that indicates the grain in a wood stick.

(Testimony of Theodore W. Kerr.)

Q. Will you draw a line to that and mark it with the word wood''?

A. (The witness wrote on the sketch.)

Q. And may I ask, based on your observation of the sample that came to you in 1948, was that wood square in cross-section? A. Yes, it was.

Q. It was. Now within the device that you have sketched here for us this morning are there any fluid columns or anything that would correspond or respond to the definition fluid?

A. Yes, there are. There are four of them.

Q. Will you mark the first with the numeral 1 and the others with successive numerals?

A. (The witness wrote on the sketch.)

Q. Now these occur where in your sketch in relation to each other?

A. Approximately in the center of each of the four flat sides.

Q. Do you have a definite recollection of how the orifices 1, 2, 3 and 4 had been formed in the sample that you observed in 1948? [362]

A. Yes, they were obviously cut in a piece of flat sheet stock with a table saw or router—one or the other.

Q. That is your recollection of it?

A. Yes, sir.

Q. And upon what did you base that observation, Mr. Kerr?

A. Well, the cutting marks were quite clear in the part and they were readily identifiable. As a

(Testimony of Theodore W. Kerr.)

matter of fact, no attempt had been made to polish them out.

Q. Would you tell the Court what those cutting marks would look like as you interpret cutting marks?

A. Well, they would look—well, pretty much like white streaks; I would say hardly scratches, but tool marks as they are known in the machine industry.

Q. Tool marks?                      A. That's right.

Q. And how would one remove those if he was so disposed?

A. Various ways. They can be sanded and polished out, or they can just be sanded and plain polished. Well, that's about it.

Q. Do you recall how long it was after you received Defendant's Exhibit E and the accompanying print before you received the sample of which you have been speaking?

A. I don't recall the time differential, but I would guess at it at this date that they were within about a week of one another. [363]

Q. A week of one another?

A. That's right.

Q. And I assume from that that the sample followed the letter and sketch or letter and print?

A. As I recall, I received the letter first.

Q. This sample that you observed in 1948 or received at Plastics Process Company, you say it had a wood filler and it was square in cross-section?

(Testimony of Theodore W. Kerr.)

A. That is right.

Q. Was there anything on the wood filler as you can recall it?

A. I don't recall exactly.

Q. Did you pay any attention to it?

A. Not too much except that I knew that somewhere there was to be a calibrated scale either on the wood filler or on the plastic.

Q. Did you examine it minutely at all?

A. I didn't examine it that close, no, sir.

Q. You were primarily concerned with what at that stage?

A. I was primarily concerned with the production of the extrusion——

Q. Now with further reference to his sample, was there anything in the ends of this sample that you observed?

A. No, everything was just flush; all the parts were just trimmed off even. [364]

Q. The wood? A. Yes.

Q. Was the wood flush with the outer shell?

A. It was flush with the plastic, yes, the outer shell.

Q. And was it flush with the inner shell as you have described it this morning? A. Yes.

Q. So what would we have—a square end under those circumstances? A. Yes.

Q. And that is your recollection of it?

A. That is my recollection of it.

Q. I would like to show you what has been offered here as Plaintiff's Exhibit 5, and it has been



(Testimony of Theodore W. Kerr.)

described as a replica of a certain dipstick. Will you please examine that and advise the Court whether or not it corresponds to your recollection of the sample dipstick that you received in 1948?

A. Well, as far as the way the stick is made and assembled, it is not at all the same.

Q. Will you please detail the differences as you understand them?

A. Well, the basic difference as far as the assembly is concerned is that this has been—this has been made up of a series of laminations that are just strips of plastic [365] material that have been cemented together. There is no machining—there is no machine cutting on this that I can see. There has been no attempt to saw slots in the sheet stock. These sheets have been cut to given widths and just laminated into an assembly.

Q. In the makeup of the inner and outer shells; is that right?      A. That is right.

Q. Does it correspond to your recollection and as you have sketched it here this morning with respect to the center orifice?

A. The center orifice is the same.

Q. And the wood is the same, is it?

A. The wood is the same.

Q. And what about the four smaller outer orifices?

A. They are in approximately the same position as the original sample.

(Testimony of Theodore W. Kerr.)

Q. And do you note in Plaintiff's Exhibit 5 any end closure of the dipstick?

A. Well, there is—there appears to be an end closure on this one.

Q. Do you recall such an end closure being on the sample that you received?

A. No, there was no such thing.

Q. Now as a person engaged in the extrusion of plastics, what [366] was your reaction upon receipt in 1948 of the letter, Defendant's Exhibit E, the sketch, Defendant's Exhibit F, and the sample, Defendant's Exhibit G—correction: G as you sketched it?

A. Well, my reaction was that the design was not practicable for a plastic extrusion; it was not practical for production.

Q. Would you mind explaining to the Court in detail your reasons for that conclusion, Mr. Kerr?

A. Well, the reason that it was impractical, of course, was that the volume for a special extrusion was much too small to warrant the cost of the tooling.

The second reason was that the tooling was very nearly impossible to make; it could be made, but it would be extremely difficult to make a tube with five orifices and maintain the orifices to any sort of dimensional control. The top side would tend to collapse and the bottom would sag downward; it would take on a very erratic shape.

Q. Will you tell the Court just why that would be so?

A. Well, primarily because when plastic is ex-



(Testimony of Theodore W. Kerr.)

truded, it leaves the die in about the consistency of chewing gum, and this—the plastic material must then be stretched as it leaves the die and held in a cooling form to hold it to its proper shape, and the plastic material has somewhat of a tendency to be a little sticky, such as chewing gum. It is quite difficult to hold the material to its shape. And of [367] course the orifices are only supported by air pressure in the nature of about one or one and a half inches of water column pressure, which is very, very slight, and any variation in the pressures of any one of the five orifices will distort the plastic all out of proportion to the desired finished product.

Just one hint of an inch of water column pressure in excess in any one of the four orifices, it could conceivably come out twice as large as the adjoining orifice. So it would be difficult holding all of these factors to any sort of dimensional control.

Q. Is it true that plastic extruders are bothered by a problem i.d. control in any hollow-bodied member?

A. Yes, that is the most difficult type of control, is inside diameter control.

Q. And for the reasons that you have enumerated?

A. That is right.

Q. Now I assume that this particular device—you say it would be practically impossible to make——

A. That is right.

Q. ——the dies and tools to give adequate control?

A. That is right.

(Testimony of Theodore W. Kerr.)

Q. Could it be done within the realm of good commercial practice, in your judgment?

A. No, it could not. [368]

Q. And the reason for that would be what?

A. Well, the tooling in itself would present a terrific problem, because very slender mandrills would have to extend up into what would be the wall of a square tube and would be subjected to the terrific pressures of the plastic flowing through the orifice that would constitute the wall of a square tube, and this pressure of the plastic would really tax the mechanical strength of the steel mandrills to the point where it would be difficult to get metal to stand up and do the job more than just once.

Q. In other words, there again you would have the i.d. problem, is that it?

A. Yes, we would have an i.d. problem there of keeping the orifice in its proper location. The mandrills would be so slender that they could very easily be bent either to the inside or to the outside wall of the essentially square tube

Q. And what would be the result of bending in either such direction?

A. It would result in a part that would not conform to the blueprint and would, in my notion, not be acceptable for production.

Q. Did you give any consideration in your own mind at the time of receipt of these three aspects of the tube, namely, the letter, sketch, and the sample

(Testimony of Theodore W. Kerr.)

of which we have been speaking, as to alternative ways of accomplishing the same [369] result?

A. Yes, I did.

Q. And with what result, if any?

A. Well, when I saw how nearly impossible this product would be to be made, I felt that the next step would be to simplify the design so that it could be produced.

Q. May I interrupt you at that point. What was your training prior to your first employment by Plastics Process Company, Mr. Kerr?

A. Well, I had worked as—worked eight years as an employee of Douglass Aircraft Company.

Q. In what line of work were you engaged?

A. I was engaged in sheet metal fabrication.

Q. And what was the range of your experience in that? I mean what were you concerned with?

A. Well, the range of experience was from a sheet metal worker to a supervisor of production in the sheet metal department.

Q. Now will you continue with your description of what occurred to you at the time of seeing these exhibits?

A. Well, immediately when I saw the exhibits I felt that the thing to do was to simplify this item so that it could be produced in small quantities.

Q. And will you tell the Court briefly what you did in that regard, if anything? [370]

A. Well, I took it upon myself to make a square clear butyrate tube on some tooling that we had in existence for another product, and then I took some

(Testimony of Theodore W. Kerr.)

quarter inch tubes which we happened to have in stock at the time and assembled those with a wood stick so that the round tube was in the corner of the stick rather than on the flat center side and that two scales could be read from a single fluid column.

Q. You mentioned that you first produced a tube of clear plastic with tooling that had been set up or made for another product. What was that other product?

A. The other product was a square towel bar—a plastic towel bar.

Q. Of the type used in a domestic bathroom, for example, or kitchen? A. That is right.

Q. And what did you do with that tooling? Did you actually draw a tube or extrude one?

A. Yes, I produced—I extruded a clear plastic tube through the sizing tooling to make a square plastic tube.

Q. I direct your attention to Plaintiff's Exhibit 7A and will ask if the clear tube that you extruded corresponded substantially to that?

A. That is exactly the same thing as I produced.

Q. With the towel bar—

A. Tooling. [371]

Q. Tooling. And you mentioned a smaller tubing. In that connection I will show you Plaintiff's Exhibit 7B and 7C and will ask if they correspond to the tubing that you saw?

A. They are exactly the same.

Q. Was that particular tubing, 7B and 7C, a standard article of production of the Plastic Process

(Testimony of Theodore W. Kerr.)

Company at that time?      A. Yes, it was.

Q. Now, Mr. Kerr, will you please take Plaintiff's Exhibits 7A, B and C and with your hands assemble the same——      A. You can't——

Q. ——in position to indicate what your thinking was with respect to the disposition of the small tubes within a large tube?

A. Well, you can't hold it—you can hardly hold it in position. This is essentially the way the pieces went together, however.

Q. You were then faced with the problem of holding it?      A. That is right.

Q. In that particular assembly, is that right?

A. That's right.

Q. What if anything did you personally do with respect to developing or producing an indication of how that might be done?

A. Well, I took a strip of wood and cut four—well, cut four soft cuts, two notches on adjacent corners—I should [372] say on opposite corners.

Mr. Naylor: May this be marked as Defendant's next for identification, please?

The Court: So ordered.

The Clerk: Defendant's Exhibit H for identification.

(Whereupon assembly referred to above was marked Defendant's Exhibit H for identification.)

Q. (By Mr. Naylor): Mr. Kerr, I show you an assembly, which I will represent to the Court and to



(Testimony of Theodore W. Kerr.)

opposing counsel is one prepared especially for demonstration purposes only and of recent preparation, and will ask if Defendant's Exhibit H for identification illustrates approximately what you did in working up the assembly that you have been describing.

A. Well, this is—this is, I would say, exactly the same as the one we made. It has the saw cuts in the edges the same as we made the original assembly.

Q. Will you tell the Court what you personally did in making those saw cuts? How did you go about it?

A. Well, I just took a board, and it works out that a piece of, I think it is three-quarters wood is just about the size that fits inside of this three-quarter inch square tube, so we cut it to the width that would be required to make it into a square, and then we made a setup on a table saw with a fence alongside of the saw blade, raised the saw blade up approximately a quarter of an inch and pushed the strip [373] through the saw four times on a single setup—four passes over the saw blade, and the square was cut out of the two opposite corners.

Q. Actually what you were doing was removing the opposing corners? A. That is right.

Q. Of the stick that you had originally squared; is that correct? A. That is right.

Q. Removing them in the sense that you removed a sufficient amount of the wood to permit the tubes to be inserted in the recesses?

(Testimony of Theodore W. Kerr.)

A. That is right, to leave room enough for the tube because we inserted the wood afterwards.

Q. And it is your recollection that Defendant's Exhibit H for identification corresponds approximately to the result of the work that you did in Los Angeles? A. That is right.

Q. After you had done this, did you actually make an assembly of the pieces that you had thus prepared?

A. I made an assembly just like that one there.

Q. Like Defendant's Exhibit H for identification? A. That's right.

Q. And what did you do with that?

A. Well, I sent it to Mr. Welch. [374]

Q. In San Francisco?

A. In San Francisco.

Q. And did you send it with any sort of communication?

A. I believe I did. I don't recall; I believe I did, though.

Mr. Naylor: I think you have already seen this.

Q. I will show you an original communication dated May 11, 1948, and I will ask if you can identify that? A. That is it exactly.

Q. Is that the communication you addressed to Mr. Welch? A. That is the letter.

Q. There are several questions I would like to ask you about this letter. In the first place it is upon what kind of a letterhead?

A. An inter-house letterhead.

(Testimony of Theodore W. Kerr.)

Q. And was that employed in your communications with Mr. Welch at times?

A. Yes, it was employed.

Q. And addressed to whom—Mr. Welch?

A. Yes, it is.

Q. At San Francisco? A. That is right.

Q. And is the subject matter of the letter indicated? A. Yes, it is.

Q. And what does it say? [375]

A. It says: "We received the sample dipstick from Pan-American."

Q. Excuse me, Mr. Kerr; I am speaking of the subject in the sense of the printed portion.

A. "P.A.A."

Q. Is there any reference in the body of the letter to the sample dipstick to which we have been referring earlier as the one that came to you?

A. Yes, there is.

Q. And will you state what it says there?

A. "We received the sample dipstick from P.A.A. yesterday."

Q. Yesterday. And this letter is dated what date?

A. May 11th.

Q. Is there any reference in this letter to what you did upon receipt of that sample?

A. Yes, there is.

Q. And what does it state?

A. "And we immediately proceeded to simplify same and are returning the results to you today."

Q. And from that do you gather that the sample was sent on that same day to Mr. Welch?



(Testimony of Theodore W. Kerr.)

A. Yes.

Q. Now you spoke earlier, in describing your reaction to Defendant's Exhibits E, F and G as you sketched it as being impracticable from the standpoint of cost. Did you express [376] that thought to Mr. Welch in this communication?

A. Yes, I did.

Q. Will you state how you expressed it?

A. "As we could hardly make a die for this section and keep the price within reasonable range, we decided to use the standard extrusions."

Q. And the standard extrusions to which you referred were those that you have just been describing to the Court?           A. That's right.

Q. Standard in the sense of tooling for the outside tube was already in existence?

A. That's right.

Q. And further that the smaller tubes were a regular item?           A. That's right.

Q. Is there any reference in this letter—and if there is I wish you would point it out—to the characteristics of the dipstick sample that you have described to the Court this morning, namely, Defendant's Exhibit H for identification?

A. Well, in the second paragraph I said, "As you can see each round tube surfaces two scales and a tube is allowed to extend above the top for ease of operation."

Q. And "above the top for ease of operation"—what does that have reference to, if you can de-

(Testimony of Theodore W. Kerr.)

scribe it in relation to Defendant's Exhibit H for identification?

A. Well, I would call this the top because the tube extends [377] up far enough so that a thumb can apply pressure to seal off the top of the tube.

Q. Now at that stage, at the time of writing this letter of May 11th, 1948, what was the extent of the interest of Plastic Process Company in articles of this type? Was it interested in the complete assembly or the components?

A. Just the components.

Q. And is there any reference to that in this communication of May 11, 1948?

A. Yes.

Q. Will you state where it appears and how it appears?

A. In the last paragraph: "While we do not like to get too involved, I should like to quote on all of the components, as that would enable us to furnish an assembly ready for calibration with assurance that all the parts will go together."

Q. And that was an expression of the interest of your company in the subject matter?

A. That's right.

Q. As of that time?

A. That's right.

Mr. Naylor: I will offer that, your Honor, as Defendant's exhibit next in order.

The Court: Let it be received.

The Clerk: Defendant's Exhibit I in evidence.

(Whereupon letter of 5/11/48 referred to above was received in evidence and marked Defendant's Exhibit I.)

(Testimony of Theodore W. Kerr.)

Q. (By Mr. Naylor): Now what next did you do, if anything, or have to do in relation to this dipstick, as an officer of Plastic Process Company, after sending the sample to Mr. Welch?

A. I actually had nothing more to do except to wait his orders for production.

Q. Was such an order forthcoming?

A. Yes.

Q. Did you receive such an order?

A. I got an order for tubing.

Q. From whom? A. From Mr. Welch.

Q. Do you recall approximately how long it was after you sent the sample that you received such an order from Mr. Welch?

A. I don't recall how long afterwards, no.

Q. Mr. Kerr, I hand you what purports to be a copy of a communication dated June 9, 1948, and will ask if you can identify that or if you had anything to do with it?

A. Yes. Yes, there is a reference to me.

Q. And where does it occur?

A. In the third paragraph. [379]

Q. Will you state what is the reference to you?

A. It says, "As mentioned to Ted over the phone, I am going to make up 100 only dipsticks complete with printed scales and plastic plugs in each end."

Q. And is there any reference to the other aspects of the order that he was seeking?

A. Yes. "These people originally asked us to quote on 300 units. However, the engineer informs

(Testimony of Theodore W. Kerr.)

me that now he will only be able to order 100 units. They may take another hundred or so at a later date.”

Q. Was there communicated in that any reference to permission to Mr. Welch to contact other airlines?

A. Not in this—not in this communication.

Q. I direct your attention to the next to the last paragraph.

A. Oh. Yes; I didn't look down that far. There is a reference to other airlines.

Q. Coming back now to the reference to you and the conversation with you over the phone, were you in telephonic communication with Mr. Welch from time to time about these matters?

A. Yes, I was.

Q. And do you recall talking with him in this period, namely, June of 1948, over the long distance phone in reference to dipsticks?

A. Well, I recall a discussion with him regarding the [380] dipsticks, and it undoubtedly fell within that period.

Q. I will show you again Defendant's Exhibit E, Mr. Kerr, and will ask if there is a reference in that particular communication, namely the May 3rd, 1948 letter, to other airlines as potential customers for the device?

A. Yes, I have the copy of that here. Yes, there is a mention in it in the next to the last paragraph.

Q. How did you receive that as an officer of

(Testimony of Theodore W. Kerr.)

Plastic Process Company as an indication of market?

A. I received that favorably because it indicated that there was a potential market greater than just Pan-American Airways; and of course it made the item more interesting to us as a production item.

Q. Will you also examine that communication, Defendant's Exhibit E, and state whether or not there is a reference there to the type of devices that this dipstick was intended to supplant or replace?

A. Yes, it says, "They are presently using metal and wood sticks."

Q. That is sufficient.

Mr. Naylor: I think that last communication of June 9th has not yet been identified. If I may, I would like to have it marked merely for identification as defendant's next at this time.

The Court: Let it be marked. [381]

The Clerk: Defendant's Exhibit J for identification.

(Whereupon letter of June 9 referred to above was marked Defendant's Exhibit J for identification.)

Q. (By Mr. Naylor): Next, Mr. Kerr, I would like to show you what purports to be a copy of a communication from Mr. Welch to you and Mr. Wenk under date of June 23rd, the year date not being specified, and I will ask if you can identify that.

A. Yes, I can identify this.

Q. Does this have reference to the subject mat-

(Testimony of Theodore W. Kerr.)

ter of the dipstick?           A. Yes, it does.

Q. And is it so identified?

A. It is so identified.

Q. And is there an indication in this of an order from Mr. Welch?           A. Yes, there is.

Q. For tubing?           A. There is.

Q. I will show you another document dated June 23rd with no year date specified, and I will ask if that is one of the copies of the order referred to in the other communication of June 23rd.

A. Yes, that is.

Q. How do you identify it? [382]

A. Well, I identify it by the special house account.

Q. Is that referred to on the face of the document?           A. That's right.

Q. And at what portion or at what point?

A. At the lower portion where it says "Terms."

Q. And there has been an insert, "Special house account"?

A. Well, I would interpret this as meaning, "I want a special price."

Q. To what does the order of June 23rd refer to in the way of numerical count of things and what things?

A. Well, it refers to 115 pieces of square tubing, clear plastic cellulose acetate butyrate.

Q. Wait a minute. You identify that. Why did you identify it?           A. C.A.B.

Q. Is that the abbreviation for cellulose acetate butyrate?           A. That's right.



(Testimony of Theodore W. Kerr.)

Q. Is there a dimensional indication?

A. Yes, there is.

Q. And what is the dimensional indication?

A. Three-quarters by three-quarters inches square with a 30 thousandths wall, 36 inches long.

Q. And what is the next item called for in this particular document?

A. 230 pieces of round tubing, cellulose acetate butyrate [383] clear.

Q. And dimension-wise, how is that expressed?

A. An inch and a quarter o.d. By a 60 thousandths wall,  $36\frac{1}{8}$  inches long.

Q. Do you see any reference there to anything else that is identified on that particular document?

A. Yes, it says, "See attached print."

Q. Print?

A. Print. There is evidently a typographical error but it means "print."

Q. I see. Now going back to Defendant's Exhibit H for identification, after you assembled this particular device I understand you sent it to Mr. Welch?

A. That's right.

Q. And do you recall whether or not you sent more than one assembly or just the one assembly?

A. Just one.

Q. As we see it depicted in Defendant's Exhibit H for identification?

A. That's right; just one.

Q. Mr. Kerr, directing your attention specifically to the June 23rd communication, I would like to ask you if there is any question or request directed

(Testimony of Theodore W. Kerr.)

to you by Mr. Welch concerning the ultimate construction of the dipstick?

A. Yes, I see two questions here. [384]

Q. Will you point them out to the Court and explain what you understood them to be?

A. Well, one of them asking me if I had a couple of pieces of square tubing that would enable—of any color which would enable Mr. Welch to cut some wood to fit the square tubing; and the other is asking if I have any recommendations for plugging the ends of the square tube.

Q. And is there any reference to a particular plug?

A. Yes, it says here, "The print shows a 11/32 plastic plug that has to fit over each end of the wood acting as a sealer and perhaps adding to the strength of the sections."

Q. And it concludes with an expression of appreciation for any suggestions, does it not?

A. That is right.

Q. Is there any reference in the June 23rd communication to a desire on Mr. Welch's part to have samples of this device—and in the interests of time I will direct your attention to the postscript.

A. Well, he wanted to give samples to the other airlines.

Q. Well, that takes us back to the order. Now I see 115 pieces of the square tubing and 230 pieces of round tubing. How many completely assembled sticks would that produce if all of them were used?

A. That would produce 115 complete dipsticks.



(Testimony of Theodore W. Kerr.)

Mr. Naylor: If the Court please, I will offer the June [385] 23rd, the year date being missing, communication as Defendant's next for identification.

The Court: Let it be received.

The Clerk: Defendant's Exhibit K for identification.

(Whereupon, letter of June 23, referred to above, was marked Defendant's Exhibit K for identification.)

Mr. Naylor: And the order dated June 23rd, the year date being missing, as Defendant's next for identification.

The Clerk: Defendant's Exhibit L for identification.

The Court: I suggest we take the recess now so counsel can go over to Judge Roche's court.

Mr. Naylor: Thank you, your Honor.

(Recess.)

Mr. Naylor: I have just one or two questions to ask.

Q. Mr. Kerr, do you have any interest in Mr. Welch's business of any sort?

A. None whatsoever.

Q. You have no connection with him at present?

A. None whatsoever.

Mr. Naylor: That is all.

(Testimony of Theodore W. Kerr.)

Cross-Examination

By Mr. Swain:

Q. In this Welch Exhibit E, which is the letter which was addressed to Mr. Wenk, you indicated that there was a sketch attached thereto, did you not, or rather a drawing—excuse me. [386]

A. There is a sketch in the letter, yes.

Q. I misspoke myself; I meant a drawing. And did you say that it was this Exhibit F?

A. That's right.

Q. Do I gather that that is the very drawing or the very piece of paper which was received?

A. Well, I would say it is the very one exactly.

Q. Do you recall whether you are the one who opened that letter?

A. No, I am not the one.

Q. How did you know, then, that it was the drawing which was received?

A. Well, we have a simple procedure: the girl in the office opens all of the mail and distributes it to the different personnel who are interested in the correspondence matter. Unless it is personal mail, we never open any company mail.

Q. Could it have been any other drawing, do you know?

A. I would say it could not have been any other drawing.

Q. Were you aware that the sample dipstick which was being sent down to you had the ends sealed before you saw the dipstick?

(Testimony of Theodore W. Kerr.)

A. They could not have been sealed; they were sawn off flush; the ends of the wood and the plastic were just sawn off square.

Q. I am talking about the sample which was sent to you by [387] Pan American.

A. That is what I have reference to.

Q. Were you aware that in a usable or commercial dipstick the ends would have to be sealed?

A. I had no idea that was necessary.

Q. You were aware, however, were you not, that there was a calibrated scale in the dipstick?

A. Yes.

Q. And you were aware that that was to be pasted to a wooden filler?

A. My recollection is that there was a calibration to be worked in conjunction with the fluid column, but just how it was to be installed I don't know; I don't recall.

Q. I refer you to the letter which you hold in your hand, Exhibit E, and ask you if there is an indication in the fourth paragraph that the graduate scale was to be pasted thereon.

A. Well, I had forgotten about that.

Q. You mean you had forgotten about it now?

A. That's right.

Q. But at the time, then, after receiving that letter, were you not aware of the fact that the ends should be sealed? And in that connection I show you the last line of the fourth paragraph of that letter.

A. "Maybe a square tube closed on both ends

(Testimony of Theodore W. Kerr.)

or—" I have [388] no conception of the meaning of that last line.

Q. Then it is your interpretation of that paragraph then that the ends did not have to be sealed?

A. Well, the ends of the finished product that was furnished me was a solid mass at the time; that is, there was no cavities, there was no room for sealing anything. I just can't conceive how you could have gone about sealing it.

Q. Then you were not aware then of the fact that you would have to seal the ends so that the gasoline wouldn't run up into the graduated scale; is that right?

A. To be honest with you, I was surprised to learn that was necessary.

Q. When did you first learn that plugs were necessary in the ends of this device?

A. As I recall, it was either a telephone call or a letter that Mr. Welch brought it to my attention that it was necessary to plug the ends before the product would be usable.

Q. And was that after you submitted the sample of which Defendant's Exhibit H is a replica, or was it before you made this sample? Do you recall that?

A. No. I learned that the plugs or the ends had to be plugged after I had furnished the sample. I thought that I had furnished a production part ready to go to work.

Q. How did you contemplate then that the scales would be used on this wood filler? [389]

A. Well, as I say, I had forgotten how the scale

(Testimony of Theodore W. Kerr.)

was going to be put on there. My only interest was in the simplification to show that a scale—two scales could be read from a single fluid column. That was my purpose in designing and submitting a sample to Mr. Welch. That was my sole purpose in doing that. I might add that I was not interested in making a finished product and——

Q. You were interested in supplying parts from which a finished product could be made, weren't you?      A. That is right.

Q. So that at the time you submitted this thing you did not care how the ends were to be sealed?

A. I didn't know they were to be sealed.

Q. Did you do anything or take any steps toward complying with the request in Mr. Welch's letter to you, Exhibit E, between the time you received the letter and the time you received the sample dipstick about which you have testified?

A. I don't recall having done anything until I saw the dipstick.

Q. And then in a matter of a day or so you came up with the sample, Defendant's Exhibit H?

A. That's right.

Q. Do you have the sample which was sent you by Pan American Airways about which you have testified?      A. No, I do not have it. [390]

Q. Have you made a diligent search for it?

A. This matter was brought to my attention after I left the company, and the company had moved to new quarters and I only offered suggestions where it might be found, that was all.

(Testimony of Theodore W. Kerr.)

Q. After you received the stick do you know what happened to it? A. Yes, I do.

Q. What?

A. It was kept in the sales office I would say fully two years after that.

Q. Was it dismantled? Excuse me; go ahead.

A. No, it was not dismantled; it was assembled.

Q. There was no attempt made to take it apart?

A. No, sir.

Q. Did the wooden filler slide out?

A. I don't recall of it ever having slid out.

Q. Could you look in the end and see the wooden filler and the paper chart around it?

A. I don't remember the paper chart on it; I do remember the wooden filler.

Q. A paper chart is described in the letter though, isn't it?

A. Yes, it is described here, but I had forgotten it.

Q. When you wanted to quote on samples, were you also [391] including the cost of the wooden filler in that quotation? A. No, sir.

Q. It was your idea that Mr. Welch would supply those? A. That's right.

Q. And is that expressed anywhere?

A. I don't recall whether it was expressed in letter or a telephone conversation, but I know I have informed Mr. Welch some time during that general period that we did not—we were not interested in producing a dipstick and that we suggested that he



Testimony of Theodore W. Kerr.)

get someone up in the San Francisco area to produce the finished product.

Q. And you were equipped the, or rather, you contemplated then only providing the outer square extrusion and the two tubular extrusions?

A. That was what we proposed to furnish—that alone.

Q. After you received the letter, Exhibit J, which mentioned the plugs, did you give any thought to making plugs?      A. Is that the question?

Q. Yes.

A. I had no idea what would be the best method of making a plug or plugging the end. As a matter of fact, I can't recall even making any suggestions.

Q. Do you recall whether you discussed it around your plant?

A. I would say that the only discussion I would have or I [392] might have had would be that I didn't know what would be the best method to plug the ends and had no suggestions to offer.

Q. Well now, Mr. Kerr, if a dipstick were made in accordance with this sample without any plugs in the end or with no sealing in the end and there was a paper graduate scale pasted to the wooden filler, would that be a suitable dipstick?

A. Well, we know now that it should be plugged, but at the time I didn't think that it would have any interference, because sticks had been used to immerse in the gas tanks for gauging in the past.

Q. But you were aware, were you not, it was to be used for gasoline?      A. That's right.

(Testimony of Theodore W. Kerr.)

Q. And you were also aware that a paper graduate scale was going to be pasted on here?

A. As I say, I don't recall that that is the way it was going to be handled.

Q. Since you have refreshed your recollection by reading that letter, isn't that a normal conclusion to draw, that that is the way it would be handled?

A. It is a good conclusion, yes, sir.

Mr. Swain: That is all from me, Mr. Naylor.

Mr. Naylor: No further questions. [393]

The Court: You may step down, Mr. Kerr.

Mr. Naylor: May I inquire as to what is your Honor's disposition from this point on? Your Honor has called attention to this authority which you have indicated supports the motions that were made or one of the motions that was made yesterday. Is it your Honor's wish that we proceed with the evidence?

The Court: I think I prefer that you proceed Mr. Naylor, to carry that thing on to a conclusion. Then I may dispose of your motions at the conclusion of all the testimony.

Mr. Naylor: Very well, your Honor. Thank you Mr. Welch, will you take the stand? [394]

C. MARTIN WELCH

the defendant herein, called as a witness in his own behalf; sworn.

The Clerk: Will you please state your name and occupation for the record? Your name and occupation?

A. C. Martin Welch. I am the owner of C. Martin Welch & Company, operating under three separate entities; one, manufacture and sale of aircraft parts; two, the representation of a plastic molding company in Los Angeles; three, a ski resort in the Sonora region.

Direct Examination

By Mr. Naylor:

Q. I would like to ask you, for purposes of the record, what does the initial C. in your name stand for? A. That is for Cyril—C-y-r-i-l.

Q. Will you please state to the Court what your educational background has been?

A. I graduated from high school in North Dakota; I attended college for seven years, Gonzaga University in Spokane, Washington, and University of California at Berkeley.

Q. What did you major in at Gonzaga?

A. I started out with a pre-law course and shifted upon determining that it was six years and my athletic scholarship wouldn't carry on that long and I shifted to a business ad course.

Q. Business administration? [395]

A. Business administration.

(Testimony of C. Martin Welch.)

Q. What studies did you pursue at the University of California?

A. Essentially I took math and calculus, some chemistry courses and all of the plastics courses they had to offer at the time. I believe they were six in number running nine months each—running from a six to nine months' period.

Q. These courses that you took at the University of California, were they day courses or evening courses?

A. Evening courses.

Q. Were you gainfully employed at the time you were pursuing these studies at the University of California?

A. Yes, sir.

Q. Where were you employed?

A. Moore Drydock Company in Oakland, California.

Q. And what was your occupation? I mean, what was the nature of your employment there. Mr. Welch?

A. I started at Moore Drydock, I believe it was in 1940, as a steel worker, and when I finished in 1945 I was supervisor of all steel erection on waterfront areas around the Bay for that concern, the position I worked into almost within one year after I started working there.

Q. And your employment with Moore Drydock terminated at what time?

A. September of 1945. [396]

Q. And what did you do thereafter?

A. I was referred to a particular company by one of the instructors that had taught me at the

(Testimony of C. Martin Welch.)

University of California, taught my plastic courses. I had advised him I wanted to pursue my activities in the plastic field. He recommended me to someone who hired me upon my first interview.

Q. And who was that?

A. Donald Kenneth & Company.

Q. I beg pardon?

A. Donald Kenneth & Company who at that time operated a plastic division. I was put in charge of it. They were then the representatives for the Plastic Process Company, whom I later took over—the representation of which I later took over.

Q. Did you later become the representative of Plastic Process Company?

A. Within a short time after I started for Donald Kenneth & Company.

Plastic Division was dissolved and I represented Plastic Process Company.

Q. And does that representation continue to this date? A. Yes, it does.

Q. Now, aside from these gainful occupations that you have mentioned, did you have any connection with amateur athletics? A. Yes. [397]

Q. Would you state what that is, please?

A. I presently officiate at football games for the Pacific Coast Conference.

Q. And how long have you done that?

A. Ten years.

Q. Now, you mentioned some of the products with which you are concerned. Do you have any connection with dipsticks of any kind?

(Testimony of C. Martin Welch.)

A. Presently?

Q. Yes.

A. I manufacture a variety of dipsticks I sell to the airline industry.

Q. What was your first personal connection with dipsticks of any kind, Mr. Welch?

A. The first connection with dipsticks of any kind was upon contact with Pan American Airways through Eugene Grindle. Correspondence has established the initial contact as at May approximately 3rd or 4th, 1948.

Q. And that was your first contact with dipsticks as a subject of manufacture and sale?

A. For the aircraft industry, I would say that was.

Q. Now, will you tell us about this contact with Mr. Grindle? I assume that is the Mr. Grindle, the plaintiff in this action.

A. That is correct. [398]

Q. That is the gentleman who is sitting here in court?

A. Yes.

Q. Will you tell us how that contact came about?

A. My first contact with him was from a telephone call by him.

Q. Did you see him on that day or did this call precede your first meeting with Mr. Grindle?

A. It preceded my first meeting with him. I don't recall whether I saw him in his office that day or several days later.

Q. That prompts me to ask: Where is your office located in San Francisco?



Testimony of C. Martin Welch.)

A. 55 New Montgomery Street.

Q. And where do you reside, Mr. Welch?

A. In Millbrae, California.

Q. On what street in Millbrae?

A. 1324 Vista Grande.

Q. Vista Grande?                   A. Vista Grande.

Q. In what part of Millbrae is that situated?

A. It is in the Highlands district next to the Skyline Boulevard.

Q. It is proximate to the Skyline Boulevard?

A. Yes.

Q. Do you know where Pan American's local facilities are? [399]                   A. Yes.

Q. Where?

A. The old International Airport seaplane base, I guess, would be the best way to identify it, just north of the present San Francisco International Airport.

Q. On the occasion of this first call from Mr. Grindle, will you state your present recollection of the purpose of that call? What did he ask for?

A. Inquiring about a method of manufacturing a plastic dipstick.

Q. And was any description of the actual make-up of the stick given to you in the initial telephone call?

A. Not as I recall, Mr. Naylor.

Q. Was it a general discussion or was it a detailed discussion?

A. Rather a general one. He requested that I stop by and see him at his office.

(Testimony of C. Martin Welch.)

Q. He requested that you stop by. Did you do so?

A. I did so, yes. I don't recall whether I saw him on the way home that day or on the way into work the next morning, or several days later, but it was en route either to my office or from it that I visited Mr. Grindle at his office.

Q. Do you recall what Mr. Grindle's position was with Pan American at that time?

A. Yes, he was an engineer, in the engineering department; [400] draftsman, I guess.

Q. And did you see him personally on the occasion of your first call at the Pan American facility?

A. Yes.

Q. And will you tell the Court what ensued? What did Mr. Grindle represent to you as to what he wanted you to do, if anything?

A. He asked—he inquired as to the availability and price of an extrusion, showed me a drawing of that extrusion, told me what it was to be used for, and also showed me a dipstick fabricated out of lucite with, to the best of my recollection, holes appearing on the four surfaces drilled from the outer surface in such a manner as to trap gasoline up to a certain level—holes in series; quite a number of holes drilled all along the outside upwards from the bottom at a slanting angle downward that would trap fuel in them.

Q. At a slight angle, you say, An angle from what? The perpendicular axis of the stick itself?

A. Yes, from the perpendicular axis running

Testimony of C. Martin Welch.)

downward if you would hold the stick upright top to bottom with the bottom up.

Q. Would you describe these as traps or cups?

A. That would be a very good description of them.

Q. Did you say he showed you a sketch?

A. A drawing, I believe it was. [401]

Q. I would like to show you Defendant's Exhibit F, and I will ask you if that is a sketch or a print of the sketch that Mr. Grindle exhibited to you.

A. I have reason to believe, Mr. Naylor, that this is the exact print.

Q. And what is the reason you have for such a belief, Mr. Welch?

A. At the time I inquired—apparently inquired; I don't remember it, but it is apparent that I would have inquired as to tolerances and where initially I wrote down on this drawing, "any tolerances O.K.," I then erased it. It appears to this day and it definitely is my handwriting.

Q. It is your handwriting?

A. Unless I have one alive that can produce it exactly as I do, this certainly is mine.

Q. You recognize it as such, do you?

A. Yes.

Q. And what is your best recollection as to the time when you may have written this language on the print?

A. Well, sir, Mr. Naylor, to my best recollection, it would have been shortly after I first seen it. It didn't necessarily have to be that day, but it would

(Testimony of C. Martin Welch.)

have to have been I believe that day or the next, because I believe I immediately sent this drawing to Los Angeles and I didn't see it again until I located it in the files of the Plastic [402] Process Company.

Q. I would like to ask you about that. When did you see it the second time after you had sent it to Plastic Process Company?

A. I don't recall of seeing it until September or October in 1953.

Q. 1953? A. Yes.

Q. And what was the occasion of your seeing it on that particular date or at that particular time?

A. My occasion for searching for it, shall we say?

Q. Yes.

A. I had been contacted by Mr. Fox of Pan American and asked to visit him. I saw Mr. Fox in company with, as I recall, Mr. Kiester and Mr. Boyle.

Q. Kiester and Boyle?

A. Kiester and Boyle.

Q. All right.

A. They presented to me a drawing which I recognized then, as I do now, of a drawing made in 1948 of a dipstick assembly the likes of which I presently and have always furnished them, stating it was designed by one of their employees and that I made the dipsticks from the drawing. I told them about a drawing something like this and they denied the existence of such a drawing. [403]

(Testimony of C. Martin Welch.)

Q. Did you then institute a search in an effort to locate such drawing or such print?

A. My point of defense with them, Mr. Naylor, was that they were being told falsely that the drawing they were showing me was the original drawing and that I would try to produce a copy of the original drawing which was quite different than the drawing——

Q. All right; without going into detail at this particular point, will you tell us what you did to locate a print, if you did locate such a print?

A. I went back to my offices and looked through my own files and I could not. As I recall very definitely, I called Los Angeles and asked them if they would still have their old files. They said that if they were separated from a group of storage parts or files that had not been stored in a particular warehouse of theirs that had been burned down several years before, why, they might still be available. And I immediately proceeded to Los Angeles.

Q. And did you personally cause a search to be made or did you make a search?

A. I located the drawing myself, this particular drawing myself, in the files marked "C. Martin Welch" of 1948.

Q. And is it your belief that Defendant's Exhibit F is the exact print?

A. I wouldn't know how another type of print would have [404] gotten in their files, Mr. Naylor, and that causes me to believe that that is the exact one that was sent there, plus the fact that my hand-

(Testimony of C. Martin Welch.)

writing is on it, which I recognize. It was on it then as can be proven by the photostats I had made of it when I returned.

Q. Since locating this particular print at Plastic Process Company, has this particular print, Defendant's Exhibit F, remained in your custody?

A. Yes.

Q. Except for the time that you gave it to me?

A. Except the time I gave it to the photostater to have copies made.

Q. Did you have copies made of it?

A. I had, as I recall, three copies made.

Q. And did you supply Mr. Fox with any of those copies?

A. I supplied a copy to Mr. Boyle and a copy to Mr. Fox and retained one myself.

Q. You have described several proposed devices that were exhibited to you by Mr. Grindle on the occasion of your first visit to his office at Pan American. One was a device with the holes drilled in the sides on an angular basis? A. Yes.

Q. To provide traps for the gasoline or fuel. Will you describe anything else that was exhibited to you at that time? [405]

A. To the best of my recollection, the only other dipsticks that I saw at that time were the normal wooden or an exact dipstick that was presently in use which appeared to be a four-sided piece of wood with calibrations stamped thereon.

Q. Was that the type that was in use at that time?



(Testimony of C. Martin Welch.)

A. That is correct. It is one of the types that were in use at that time.

Q. I show you Plaintiff's Exhibit 5 which has been represented here as a replica of a 1948 device, and I would like to ask you to examine that, if you will, Mr. Welch, and state whether a device corresponding exactly or substantially to that was exhibited to you by Mr. Grindle on the occasion of your first visit?

A. I, until my visit to the courtroom, had never seen a sample of a dipstick like this.

Q. You had not?

A. I had not. I was told at the time by Mr. Grindle that one was being fabricated by their shops—one was being fabricated that was in effect, in shape, a duplicate of the drawing you showed me. He also informed me that he would send this to Los Angeles; he didn't give it to me.

Q. He didn't give it to you?

A. He didn't give it to me or show it to me; it was not in his office at that time.

Q. Do you have a positive recollection of [406] that?

A. Well, it might be awfully hard to remember dates. I think that you can remember what you have seen before that was so close to your present field like a dipstick. I have been interested in dipsticks for eight years and it seems so unlikely to me that I would have forgotten if he gave it to me.

Q. Do you have any recollection of his handing

(Testimony of C. Martin Welch.)

you a dipstick corresponding to Plaintiff's Exhibit 5?      A. Absolutely none.

The Court: I think we will take a recess now until 2:00 o'clock this afternoon.

(Whereupon, an adjournment was taken to 2:00 o'clock p.m. this date.) [407]

Tuesday, February 28, 1956—2:00 P.M.

\* \* \*

### C. MARTIN WELCH

resumed the stand.

#### Direct Examination

(Continued)

By Mr. Naylor:

Q. At the noon recess, Mr. Welch, we were talking about your first call on Mr. Grindle at Pan American as a result of his inquiry to you, is that not so? And you had mentioned the fact that a print of a sketch had been handed you.

A. That's right.

Q. In that conversation you mentioned, as I recall it, that at least one sample of a different dipstick had been shown you?      A. That's correct.

Q. Namely, the pocket stick. What did you do after the call on Mr. Grindle, what was your next move in this matter? [408]

A. I would have—had I called on Mr. Grindle on the way home that night, I would have waited

(Testimony of C. Martin Welch.)

until the next morning to write the letter to the plant that has been produced in evidence in court here and forward the print.

Q. Excuse me. Do you mean to the Plastic Process Company?

A. To the Plastic Process Company.

Q. In Los Angeles. And they were your principals in this matter, were they not?

A. That's right.

Q. I show you now Defendant's Exhibit E and will ask if you can identify that for the court.

A. I can identify it.

Q. Is that the communication that you wrote to Plastic Process Company after the initial call on Mr. Grindle?

A. That's correct.

Q. And without going into the detail of the letter, will you be good enough to examine it and state whether or not there is any reference in that communication to the subject matter, and if so, state where it appears?

In the interest of time I will direct your attention to the printed portion of the letter form appearing at the top.

A. Oh, "Subject: Pan American Airways."

Q. Now is there any reference in that communication to a drawing or a print of a drawing?

A. In the first, opening paragraph of the letter, "The [409] enclosed drawing is a section of a fuel tank measuring stick, sample of which is being mailed to you today by Pan American."

Q. Was it your understanding as of the date of

(Testimony of C. Martin Welch.)

writing this particular communication that the sample would be sent directly to the Plastic Process Company?      A. That is correct.

Q. I think you previously testified that it was not given to you?

A. It definitely was not given to me.

Q. Now I direct your attention to the middle portion of this communication of May 3rd and to what appears to be a sketch that was made by hand in the middle of the context. Did you have anything to do with the making of that sketch?

A. I would have drawn that sketch.

Q. Does it appear on the copy that you hold?

A. Yes, it does.

Q. By the way, what is that copy? Is that your office copy?

A. This would be my office copy, yes.

Q. And is there any reference to the dimensioning of the device that was sketched by you in the body of the letter?

A. Only in that it calls out that the outside diameter, assumedly, must be approximately three-fourths of an inch or less square.

Q. I see. Now I direct your attention to the third from the last paragraph, to the language reading in part, "Please let [410] me know as soon as you can what you would recommend in addition to quoting on the sample." Was it your understanding in the conversation with Mr. Grindle that recommendations were to be made concerning the pos-

(Testimony of C. Martin Welch.)

sibility of constructing the device that he exhibited to you by the print on April 28, 1948's drawing?

A. I can only give you an assumption, Mr. Naylor, that that sentence might well have been prompted by the fact that even at that early stage of my experience in extrusions, I possibly noted that what we were to try and do might not be able to be obtained.

Q. And did you have any——

A. And I might have stated, "What do you recommend?" meaning, "What other alternate design," including the one that I drew on there, "might you suggest to us"?

Q. Now I direct your attention to the next to the last paragraph and to the sentence that reads, "It was mentioned that these people would have no objection to us selling other airlines this fuel gauge, as they are all presently using a metal or wood stick which is unsatisfactory to the extent that the gasoline evaporates so rapidly that an accurate reading is not always obtained." Now what prompted that? Who mentioned this?

A. My only contact with Pan American at the time was through Mr. Grindle, and following that reasoning, it would [411] have to be him that mentioned it.

Q. You had no contact with others in Pan American?

A. Not, certainly not on the occasion of the first visit, and for quite a few visits afterwards.

Q. Now, coming now to the last paragraph of

(Testimony of C. Martin Welch.)

the letter, reference being made to, "We are only to furnish the extrusion, not the paper scale charts or the wood." Was that the understanding that Mr. Grindle imparted to you in this first conversation?

A. That is correct.

Q. And again, there is a reference to something in plastic to replace the wood. Was that intended by you to seek a suggestion from Plastic Process?

A. Yes, I would interpret it as such, Mr. Naylor.

Q. Now, did you receive anything from Plastic Process Company in response to this May 3rd, 1948, letter of yours? A. Yes, I did.

Q. Can you recall approximately how long it was before you had a response to that communication?

A. Because of dates on correspondence, Mr. Naylor, I can recall almost exactly that. It is only because my memory is refreshed by the letter of transmittal of Mr. Kerr's, dated May 11th. Otherwise I would have to say that it might have been a week or two weeks or a month.

Q. I show you now a communication which is dated May 10, [412] 1948, and will ask you if you can identify that?

A. Yes, I can identify it.

Q. And is that your office copy of the communication? A. That would be my office copy.

Q. Addressed to whom, Mr. Welch?

A. Addressed to Harry Wenk.

Q. And Harry Wenk is who?

A. He is, was, the vice-president in charge of sales under whom I directly worked.



(Testimony of C. Martin Welch.)

Q. Now I ask you to examine that particular communication and state whether or not it has any reference in it to dipsticks.

A. Only on one line, toward the middle of the page. It states, "Re: Pan American. Where's the dope on the gas dipstick?"

Q. And that is the only reference in that communication, is that correct?

A. That is the only reference.

Mr. Naylor: We will offer that, your Honor, as Defendant's next.

The Court: It may be received and marked.

The Clerk: Defendant's Exhibit M in evidence.

(Whereupon, letter from Welch to Wenk, dated 5/10/48, referred to above, was received in evidence and marked Defendant's Exhibit M.) [413]

Q. (By Mr. Naylor): I show you what has been offered here, Mr. Welch, as Defendant's Exhibit I, and will ask you if you are familiar with that.

A. Yes.

Q. I direct your attention to the fact that the letter contains a statement, " \* \* \* and are returning the results to you today." Do you recall having received such results?

A. Yes, I did definitely receive them.

Q. Can you describe to the Court the form that the results were in?

A. There were four units to the section Mr.

(Testimony of C. Martin Welch.)

Kerr sent up, three pieces of plastic tubing and a wood filler spacing bar.

Q. And was that all? A. Assembled.

Q. Excuse me. All assembled?

A. Assembled into what was to represent and was intended to represent a dipstick.

Q. Now I would like to ask you specifically if that assembled device was accompanied by anything else in the way of physical pieces of a dipstick?

A. No, there were only four parts to it and I have identified them as three pieces of tubing and a wood core or filler.

Q. And they were assembled as you received it?

A. Assembled as I received it.

Q. Now what was your practice in communicating back and [414] forth between Plastic Process and your office with respect to samples? Do you know how this sample would have come?

A. Today, and to the very best of my recollection, from the very first day I started with Plastic Process Company, all correspondence and all samples, with the possible exception maybe of bills to me for material which the girls might not have wanted to send out, airmail. All correspondence and all samples between us went back and forth airmail—still do to this very day.

Q. Is it your belief, because of that, that this sample from Mr. Kerr came by airmail to you?

A. Well, I more strongly believe it also because I was in quite a hurry for the part, and I think I

(Testimony of C. Martin Welch.)

can recall requesting either by phone, and definitely by my letter of May the 10th, that I was awaiting this information.

Q. Now I direct your attention to the concluding sentence of the first paragraph of this May 11, 1948, communication, Defendant's Exhibit I, to the statement about butyrate. Will you read that, please?

A. "Also, butyrate is better than lucite for aromatic hydrocarbons, according to authority."

Q. And what does that mean to you?

A. Well, very simply that Mr. Kerr substituted cellulose acetate butyrate for the tubing he sent up in preference to the, very apparently, lucite section he received. [415]

Q. In that connection, Mr. Welch, I would like to direct your attention to Defendant's Exhibit F, which again is the print, and will ask if there is any reference to the material of which that was proposed to be extruded.

A. In two places on the print, Mr. Naylor, and the title block of the print; it calls out, "Extrusion—three-quarter inch square lucite." And in the body of the print on a note it says, "Extruded in clear lucite plastic or equivalent."

Q. Then in that connection do you interpret Mr. Kerr's reference to butyrate in the May 11th communication to you as his suggestion of a better material? A. Most definitely.

Q. Now coming back to the results that Mr. Kerr referred to in this communication, I would

(Testimony of C. Martin Welch.)

appreciate it if you would examine Defendant's Exhibit H for identification and state whether or not that corresponds exactly or substantially or in any way to the assembly that you received from Mr. Kerr.

A. Substantially, I would say; with the exception that to my recollection, the wood bar, perhaps, was not as dimensionally made as this one that my neighbor and I made several weeks ago. We took quite a bit of time in fabricating this sample, so we'd have even sides on all four surfaces for calibration scales, and a good fit.

Q. Do I understand from that, then, that dimensionally the [416] wood spacer that was prepared and sent by Mr. Kerr was not exactly like the wood spacer that you observe in Defendant's Exhibit H for identification?

A. It was very close to it, Mr. Naylor, with perhaps—without thought again by Mr. Kerr in sawing it out, of creating four equal surfaces of exactly the same dimensions.

Q. Now what significance, if any, does the idea of four equal surfaces have to you?

A. Well, mainly that if you were to wrap paper around there, paper charts that were scaled out with calibration figures on them, you would require the widest surface possible to obtain in order to give the largest possible size numbers, to print on there the largest possible size numbers; and also because of bending the paper around the wood, each of two sides particularly would have to be

(Testimony of C. Martin Welch.)

identical, because you would have irregularity in laying your paper on if they were not. So that your imprint on the paper may fall in a groove on one side.

Q. Is it your recollection that the Kerr sample then had not been so carefully dimensioned with respect to the providing of four equal surfaces on the wood itself?

A. That's right, I don't believe Mr. Kerr was interested in exactly what the dimensions were on the wood. He wanted to position the tube so that you could get two readings off of each single [417] tube.

Q. Now did the assembly correspond to Defendant's Exhibit H for identification with respect to the two inner tubes and the wood spacer being cut flush with one end of the outer tube as you see it?

A. Yes, I am sure it did.

Q. And what was the characteristic of the other end?

A. The extension of the quarter-inch tubes approximately one-eighth to one-quarter inch above the flushness of the wood and square outer plastic tubing.

Q. Now would you tell us whether the device sent by Mr. Kerr had any attempt made at sealing the ends of the structure in any way?

A. I am so positively sure it did not.

Q. Now upon receipt of this particular sample from Mr. Kerr, what did you do next in the sequence of attempting to produce a satisfactory dipstick?

(Testimony of C. Martin Welch.)

A. Following that we—I say we, including my neighbor, who had the tooling shop to rout out wood and so forth, to saw-cut wood—he had a table saw, mainly, plus other equipment that would be of help, and when we arrived at a satisfactory piece of wood, I can recall marking it with pencil markings to indicate graduation scale positions for particular numbers on the sides of it.

Q. You mentioned your neighbor. Who is your neighbor?      A. Louis Klein. [418]

Q. And is he actually a neighbor in the sense of living close by you at Millbrae?

A. The next house from me.

Q. The next house. Who is Mr. Klein? I mean, what does he do?

A. His present capacity is, I believe, business manager for the public school system in Millbrae.

Q. And had you known him very long?

A. Since I moved next door to him in 1947.

Q. Have you known him ever since? Have you lived next door to him ever since?      A. Yes.

Q. Have you ever had occasion to observe Mr. Klein in his shop?

A. Quite frequently since 1947. I even used to run his lathe to pick up a few pennies at that time.

Q. And did you ever observe anything under construction in Mr. Klein's shop?

A. Over a period of time, quite a number of things under construction, yes.

Q. Without going into detail, would you mention a few of them?



(Testimony of C. Martin Welch.)

A. Castings that I speak of that I helped machine on the lathe, for a neon cathode housing, I believe. He's been quite prominently known for his ability to produce a particularly [419] flexible chair for spastic children. He is quite a design engineer. He has been called on quite a number of times to make display equipment for the Sacramento Fair, and he had reviewed to me some time or another during our association that he had made quite a bit of display equipment for the Treasure Island Fair. Quite a design engineer in his own right.

Q. And you have been in his shop?

A. Yes.

Q. And you have worked in his shop?

A. Quite frequently, yes.

Q. Now precisely what were you seeking after receiving the sample from Mr. Kerr in going to Mr. Louis Klein?

A. To supply a sample to Pan American in final form, but for the calibrations, which I at that time had no way of knowing just dimensionally what they might be.

Q. And did Mr. Klein perform any operation at all in your behalf with respect to the assembly of what you believed to be a satisfactory dipstick?

A. He assisted me in running out a number of pieces of wood until we got a satisfactory section. I might clarify that to the best of my recollection, that he actually ran the saw.

Q. You say he actually ran the saw?

(Testimony of C. Martin Welch.)

A. He actually ran the saw. [420]

Q. Mr. Welch, I show you still another dipstick assembly, which was marked as an exhibit on, I think, your deposition, or Mr. Grindle's, I forget which, and I will ask you if that corresponds in any respect to the assembly that you made up as a result of the help given you by Mr. Klein.

A. Well, I recall the sample as being some parts I picked up in my workshop when Mr. Klein's saw wasn't available on a particular day, to show an approximation of what I had delivered, and I took no trouble to flush out the ends. The piece of wood I picked out is one similar to the one we presently use, and I would have it in stock. It is radiused, and also the tubes are cemented into the ends of the tube, indicating it is just a spare piece of tubing I had already present in the shop.

Q. I see.

A. So it is different in those respects.

Q. In those respects?

A. And also the tubing sticks out at either end to indicate this particular tube was used for a ten tank dipstick, and found lying in my workshop. Undoubtedly it was from a ten tank dipstick, because it is not trimmed flush. It would be put in to the inserted—(indicating)—

Q. It is an illustrative assembly? A. Yes.

Q. Now I direct your attention to the fact that certain [421] pencilled markings appear on the wood filler. What does that signify to you?

A. Well, they were an effort on my part to

(Testimony of C. Martin Welch.)

recreate what I had imprinted on the initial sample I took over to Mr. Grindle, just to show, as I stated before, little lines I put on there.

Q. Now I direct your attention again to Defendant's Exhibit H for identification and will ask you to note especially the cross-sectional characteristics of the wood spacer included in that assembly. What is the nature of the cuts that were made in that particular filler to accommodate the smaller inside tubes?

A. They are square cuts, the type only of which—I don't know how you would obtain much else on a table saw. They are square cut, right angled cuts, I would call them.

Q. They are right angle cuts?

A. Right angle cuts made in adjacent corners.

Q. And was that——

A. Opposite corners, I should say.

Q. Was that the product of Mr. Klein's assistance with his table saw?

A. Yes, we, I think at that time, tried to leave a little more body in there, but—at least I am positive, some on the body. We didn't bother with the sample we took over to Pan American. It was a concern to us to build up that cross-section, [422] if we could. It was also a concern to us to give as much surface on the four sides.

Q. Did you actually discuss with Mr. Klein at that time the matter of building up the cross-sectional aspect of the wood filler?

(Testimony of C. Martin Welch.)

A. Yes, he recommended leaving a little bead in there at that particular time, I believe.

Q. And was any attempt made to cut such a piece of stock?

A. Yes, he cut various pieces, I believe, at that time, like it. I can't be positive about that. I know that some time or another, possibly after that, we tried cutting it. Maybe it was at that particular time.

Q. Now I would like to ask you specifically whether in this conversation—and I am speaking of the conversation with Mr. Klein that followed receipt by you of the Kerr assembly—did Mr. Klein make any suggestions at to alternative methods of cutting the cross-sectional aspect of the wood?

A. Not at that time he didn't. Later on it was at his suggestion that we radiused the wood, but that was some time afterwards.

Q. By "some time," what do you mean?

A. Well, I can't place it.

Q. Would you say days or weeks or what?

A. I think weeks or—I believe that the next problem that [423] I took over to Mr. Klein was after I got the purchase order or at least indication of the purchase order, if not the actual purchase order.

Q. And this——

A. Could have been, I would say, any time after June the 10th, 1948. He suggested to me that we could lick this whole thing, giving ourselves a

(Testimony of C. Martin Welch.)

thicker cross-section in the center plus a widest possible surface on which to lay the imprinted charts, by routing out the wood.

Q. And did you follow through on that suggestion? If so, just tell the Court briefly what you did.

A. Well, immediately after getting the purchase order, I went to a particular mill that he recommended to do that work.

Q. The name of the mill, please?

A. Fink & Schindler is the first place he sent me to.

Q. And were they able to satisfy your demands?

A. Well, no, they weren't interested in the small quantity I required; I only wanted a thousand feet, I think, of the wood, and they referred me to another place, the Schafer's Mill, which is nearby—I believe on the same street, as a matter of fact a few doors down. It is a much smaller mill.

Q. And were Schafer's able to produce a radius cut wood spacer?

A. Yes, they made the wood for me for some little period of time, and I received delivery of the first parts, I know, in [424] July.

Q. I show you now a short section of wood and will ask if you can identify that for the Court, please.

A. This is an exact pattern of the wood we presently use and have used since receiving the first order in the early part of July, 1948.

Q. And what specifically is the difference between the cross-sectional characteristics of the

(Testimony of C. Martin Welch.)

small piece I have handed you and the piece in the assembly, Plaintiff's Exhibit H for identification?

A. The grooves on the opposite corners of the wood are diametrically rounded out to accommodate the dimension of the quarter-inch round tube.

Q. And is that the type of wood spacer that you were seeking when you contacted Schafer's Mills?

A. It's an exact duplicate of what he first produced, yes, and what I was seeking.

Mr. Naylor: We will offer that, your Honor, as Defendant's next in order.

The Court: Let it be received.

The Clerk: Defendant's Exhibit N in evidence.

(Whereupon, wood part referred to above was received in evidence and marked Defendant's Exhibit N.)

Q. (By Mr. Naylor): Mr. Welch, I next direct your attention [425] to Defendant's Exhibit J and will ask if you can identify that, please, stating what it is.

A. That would be my office copy of a letter to Plastic Process Company, Los Angeles.

Q. And the date of it?

A. Dated June the 9th, 1948.

Q. Now is there an indication there concerning the prospect of an order from Pan-American Airways?

A. Very definitely.

Q. And how is it stated in that communication?

A. "P.S. As mentioned to Ted over the phone, am going to make up 100 only dipsticks complete



(Testimony of C. Martin Welch.)

with printed scales and plastic plugs in each end. These people originally asked us to quote on 300 units. However, the engineer informs me now he will only be able to order 100 units. They may take another 100 or so at a later date, however."

Q. Does that signify to you that between the writing of this communication, Defendant's Exhibit J, on June 9, 1948, and your receipt of the assembled Kerr device, that you had seen Mr. Grindle again? A. Yes, definitely, I am sure I did.

Q. In that connection, Mr. Welch, I direct your attention to the communication dated May 14, 1948, and will ask if you can identify that.

A. Yes, this would appear to be an original. I notice my [426] signature, my M on the bottom of it. An original of a letter I sent to Los Angeles, the original letter apparently was taken from their files.

Q. And is there a reference in that communication to any contact with Pan-American relative to the dipstick?

A. In the opening sentence, I believe, is the only reference.

Q. It's very brief; will you please read it so that we will understand it? A. It says:

"Dear Harry:

"Will see Pan-Am. this p.m. on the dipstick. Thank you for the quick service."

Q. And how do you interpret that in relation to what had gone before? What does it signify to you?

A. That I had undoubtedly gone into the office that morning with the completed sample to be taken

(Testimony of C. Martin Welch.)

to Pan-American and was going to go home early and stop by there on the way to present it to them.

Mr. Naylor: We will offer that, your Honor, as Defendant's next in order.

The Court: Let it be received.

The Clerk: Defendant's Exhibit O in evidence.

(Whereupon letter from Welch to Wenk, dated 5/14/48, referred to above, was received in evidence [427] and marked Defendant's Exhibit O.)

Q. (By Mr. Naylor): Now in that connection, Mr. Welch, after you had received the sample from Mr. Kerr and you and Mr. Klein had done to it what you have been describing, when you next saw Mr. Grindle did you give him anything that was intended to be the result of the work that had been done? A. I handed him a completed assembly.

Q. And of what did that assembly consist?

A. Four parts, namely, three-quarter inch square tubing, two three-quarter inch round tubes and a wood core, wood filler.

Q. And had you assembled those before taking the components to Mr. Grindle?

A. Certainly.

Q. Now at that time did you have any square tubing and round tubing?

A. No, no, I did not.

Q. You did not. And do you recall approximately when you called on Mr. Grindle with this assembly that you have been speaking about?

(Testimony of C. Martin Welch.)

A. Recollection would allow me to say it was shortly after receiving the sample, and having done this work in Mr. Klein's shop, but the letter you have just shown me indicates that I saw him on the 14th of May.

Q. Would you take it from Defendant's Exhibit O, dated [428] May 14th, 1948, with the reference that you have just made, that it was within a day or two of that writing?

A. I would say it was that afternoon.

Q. You were anxious for the business, were you?

A. Well, I was pretty broke at the time, Mr. Naylor. We needed all the business we might possibly be able to obtain.

Q. Now did you leave the complete—strike that.

In this assembly that was delivered to Mr. Grindle, there is one further question about it. Will you describe as nearly as you can recollect the cross-sectional characteristics of the wood spacer?

A. Well, I am quite certain on that, Mr. Naylor. It was a piece of wood somewhat under three-quarters of an inch in size with two square-cut right angle cuts in the opposite corners.

Q. In the opposite corners? A. Yes.

Q. Did you leave that assembly with Mr. Grindle at Pan-American?

A. Yes, it was received quite enthusiastically by Mr. Grindle and shown, I believe, to several of the boys in and around his desk in the engineering group, and quite some comment took place that this certainly was what they were searching for.

(Testimony of C. Martin Welch.)

Q. And you say it was enthusiastically received. What were [429] you to do further about it, if anything, at that time?

A. In conversations that followed, I was asked, possibly on this very same visit or during the same visit, if I would make such a dipstick up, that they would try it out, test it for durability. It was most obvious that it would work, it would contain a column of fluid in the tube. They didn't have to test it in that manner. They had only to test it for durability. Those tests were made during the ensuing week or two with this very sample I left, and as a result of those tests I was informed on or about the first part of June by Mr. Grindle that that's what they would like to have me make, and of course would have to have paper charts in it, and as a consequence to having paper charts, it would also have to be plugged. That would be the only reason to plug it, would be to keep gasoline off the inner surface of the paper charts. If you had another manner of imprinting on the wood your calibrations, you wouldn't have to have it plugged. It would be stronger, because it would—and did, the sample I left with them did split on the ends, because there was no adhesive plug on it.

Q. There was no plug on it?

A. No, the tubing split quite badly.

Q. Are you positive when you say that the sample that you delivered to Mr. Grindle did not have plugs in it?

A. Mr. Naylor, I searched for a way to plug

(Testimony of C. Martin Welch.)

those ends for [430] a month and a half at least. It was the main reason and the only reason I was not able to make an August 1st or August, should I say even July 21st, delivery commitment date. I couldn't find a satisfactory method of plugging the ends. The original blueprint I received from Pan-American, which was made up from the sample I left there, stated, "Fill the ends with AN-C-141 cement," which to this day remains an impossibility, a complete impossibility.

Q. Now you are familiar, of course—now I will show you Plaintiff's Exhibit 12, which is the June 10, 1948, letter, and I assume that you are familiar with that, since it was addressed to you?

A. Yes, I am.

Q. Now reference is made, is it not, in the first paragraph to three copies of your drawing No. D32.061.114?

A. It is that. That is the opening line of the letter.

Q. On fuel tank dipstick assembly?

A. Right.

Q. Now is that followed, or not, by reference to a purchase order?

A. "Our purchase order will be issued for 100 units, based upon your quotation dated June 6, 1948."

Q. And then it goes on to relate to future orders, does it not?

A. In that particular paragraph, yes. [431]

Q. Yes, sir. Now in the next paragraph I would

(Testimony of C. Martin Welch.)

like to ask you if there is any reference to the characteristics of the sticks?

A. There certainly is. It states, "We have altered the design of the sticks \* \* \*," and I interpret that to mean the design that I left with them, from the original sample.

Q. And what do you interpret the words, "original sample," to mean in that communication?

A. That sample I left on the 14th of May.

Q. And then specifically the alteration relates to what? What aspect of the stick is that?

A. To incorporate solid plastic sticks in each end for additional strength, because the sample I left on the 14th of May split on the ends—not because I had filled it with anything on the 6th of June.

Q. Now this reference to the three copies of our drawing No. 32.061.114; what is your recollection of what that drawing portrayed?

A. It described or portrayed the various parts, wood filler, tubing, and most important to me and what I require most was the calibration chart.

Q. Now you mentioned wood filler. I should like to ask you specifically what you recall as being the characteristics of the wood filler or spacer, depicted in the drawing that accompanied this June 10, 1948, letter to you? [432]

A. The wood filler did not have radius grooves in it, had square-cut, right angle grooves.

Q. Are you positive of that recollection?

A. Most positive.



(Testimony of C. Martin Welch.)

Q. And did you take it from that that this was a drawing of the sample that you had left?

A. Not only from that. I had other reasons to believe that the D32.061.114 drawing was made principally from the sample I left. The most important one that you could prove, of course, is that that original drawing, contrary to testimony given here by Mr. Chong and Mr. Grindle, did not have radiused corners on it.

Q. That's your most important reason for believing it?

A. Well, you could put it this way. That is the most important way we could prove. I had other reasons to believe that the drawing was made from the sample I left on the 14th of May.

Q. Will you state what those reasons were for such belief?

A. Principally, Mr. Grindle informed me that to purchase the part, he would have to incorporate a drawing along with the purchase order, because it was the sole practice of Pan American when ordering parts such as these to include a drawing so that they would be made to that drawing's specifications.

Q. And that was for what, inspection [433] purposes?

A. Yes, that is probably one of the big reasons. It is their procedure, I am sure, today and always has been, probably.

Q. Mr. Welch, I would like to show you a print of what is identified as drawing No. D32.061.114,

(Testimony of C. Martin Welch.)

and will ask if that is the print as you recall it that accompanied the June 10, 1948, letter from Pan American.

A. This was exactly one of the three copies. I am so positive in saying that, in that this print also I obtained from the files of Plastic Process Company.

Q. You obtained that from the files of Plastic Process Company?

A. 1948 file of Plastic Process.

Q. On what occasion did you so obtain it?

A. In searching for this other drawing. I had misplaced, I guess, the other two copies with it, or maybe I left one with the—Oh, I don't know what I might have done with them. I couldn't locate them, and I found this original in that file. I later determined the reason I found it in the file: It is because of a letter of transmittal after receipt of the purchase order asking Mr. Kerr what in the world AN-C-141 cement was. And I referred to this drawing when I sent it to him.

Q. Mr. Welch, I direct your attention again to the Defendant's Exhibit K, your letter of Mr. Kerr that you [434] previously mentioned, dated June 23, and will ask if that letter contains any reference to the inclosure of a print. If so, would you state how it appears in the letter?

A. Yes. I believe the only reference is to a print. It says on the bottom postscript, "Don't discard this print as while I have another, I may need same to send to other airlines, as it is very likely there is a

(Testimony of C. Martin Welch.)

definite need for a dipstick like this and am going to send samples to all the airlines when I finish this job in the hope of securing orders for more."

Q. And do you interpret that as being a reference to the print that you hold here of the Pan American drawing?

A. I would have had—I had no engineering service or drafting service available to me at the time and I would have sent that print down to Mr. Kerr.

The Court: Will you identify that exhibit a little more?

Mr. Naylor: Yes, I am going to right now, Your Honor. We will offer that as Defendant's next in order.

The Court: Let it be received.

The Clerk: Defendant's Exhibit P in evidence.

(Whereupon blueprint referred to above was received in evidence and marked Defendant's Exhibit P.)

The Witness: I would like to note, Mr. Naylor, I catch in that letter, apparently, further memos that I didn't [435] know how to plug the ends on the 23rd of June.

Q. (By Mr. Naylor): I will come to that, Mr. Welch. In connection with your last observation concerning Defendant's Exhibit K, will you note at what point in the letter there is the reference to the matter of plugging the ends of the stick?

A. In the third paragraph I say: "Ted, have

(Testimony of C. Martin Welch.)

you any recommendations on how I should plug the ends of the square tube?"

Q. And what interpretation do you place on that?

A. The drawing that I received, the one of three copies, the D32 drawing I received, called for this AN-C-141 cement, and I didn't know what that was, and I guess this letter interprets the problems I had in solving the cementing of the ends of the tube.

Q. Now coming back to the drawing, Defendant's Exhibit P—May I take the stick and I will——

A. I have more copies of this drawing if you——

Q. I have them, thanks.

Mr. Naylor: Does Your Honor wish to take the normal 3 o'clock recess? I am just about to start with interrogation concerning this drawing.

The Court: Yes, as long as you are going into a new subject matter.

Mr. Naylor: Yes, it is, Your Honor. [436]

The Court: All right, take the afternoon recess.

(Recess.)

Mr. Naylor: If Your Honor would care to follow this line of examination, I have an extra print.

Q. Mr. Welch, I would like to first direct your attention to the lower right hand corner of this print, D32.061.114, Defendant's Exhibit P, and I will ask if you see any indication of dating thereon?

A. Two separate dates, one June 4, '48, following the name of Art Chong, showing the drawing date, and then the checking date signed by three

(Testimony of C. Martin Welch.)

different people, of June 7, 1948?

Q. And can you read the names of the three persons who checked and approved the drawing on June 7, 1948?

A. E. L. Grindle, what appears definitely to be the name of Smith, I don't know the initials, and what appears to me to be a signature I have seen before, of Harry Kiester's.

Q. Kiester?

A. Kiester, I believe, is the pronunciation. I am not sure.

Q. June 7, 1948.

A. That date follows the signature here.

Q. Now I direct your attention to the lefthand section of the drawing, detail 6, and will ask what is your interpretation of the thing that is depicted there.

The Court: Where is that?

Mr. Naylor: In the middle left section of the drawing, [437] Your Honor, to the extreme left-hand end of the drawing.

The Witness: With your permission, may I show you?

The Court: Yes. Oh, go ahead.

Q. (By Mr. Naylor): All right.

A. That, to me, represents exactly the way the wood was milled out on the initial sample submitted to Pan American, to Mr. Grindle of Pan American, on the 14th of May.

Q. And does that indicate to you a square-cut as distinguished from radius cut?

A. Most definitely is, right angle cut—square cut.

(Testimony of C. Martin Welch.)

Q. Now I direct your attention to detail 2, which is the longer section in the middle of the drawing. Is there any indication of the cross-sectional aspect of the wood spacer?

A. May I make a correction for you, Mr. Naylor? Detail 2, as I read the blueprint, represents——

Q. I am sorry, I missed my——

A. ——the assembly is what you have reference to.

Q. I will stand corrected, Mr. Welch. It is the assembly.

A. Then answering your question—I don't believe you have to repeat it; you asked me, does that wood detail show a square cut?

Q. Yes.

A. It most definitely shows a square cut.

Q. And to you does that square cut correspond to the detail of detail 6? [438]

A. It's identical.

Q. Now do you see on this drawing any reference to the sealing of the ends of the stick, and if so, will you state where it is?

A. Yes, I do, in two places: on the left center of the drawing, "Seal both ends with AN-C-141 cement, smooth cement flush with -8. Ends must be fuel-tight."

Q. "Ends must be fuel-tight."

A. Right. Below that it says, "-12. Block -end 2 required. Cut-out similar to -6. Cement to -8 with AN-C-141 cement all around.

Q. Do you take it that detail 6 is a detail of an end plug or the wood section or both?



(Testimony of C. Martin Welch.)

A. Detail 6 is definitely intended to be the wood section.

Q. You so understand it?

A. As anyone would read a blueprint, I am certain, that that would be the answer.

Q. And you gather that from the use of the expression "cut-out similar to -6"?

A. Well, the "cut-out similar to -6" would refer to the "block -end 2 required." "-6 definitely refers to a wood filler. It's further noted in the title block of the letter, Mr. Naylor—of the print, rather—that "-6" is filler, and then over on the far side it says, "pine."

Q. And that is carried further in the assembly view, is it [439] not?      A. Yes, it is.

Q. There is a reference numeral with a lead line?

A. "Filler 1 required."

Q. I see. Now upon your receipt of Defendant's Exhibit P, I will ask you whether or not you interpreted this drawing as depicting the sample that you have delivered to Mr. Grindle as a result of the work that had been done up to the time of the completion of the assembly that you delivered to him.

A. Not exactly in total, Mr. Naylor. The drawing very definitely gives the information I required in order to make up the graduation charts. That is, basically the calibrations, without which the rest of the assembly is useless—as a finished product to be sold to an airline.

Q. And where does that appear on this particular exhibit, Defendant's Exhibit P?

(Testimony of C. Martin Welch.)

A. Under detail 2 and on the upper left corner—as I should say, above detail -2, is the actual chart calling out for Le-Roy lettering.

Q. And——

A. How long the chart should be and over in the upper left-hand corner are the exact dimensions up from the bottom of the stick the markings would have to appear when it was completely [440] assembled.

Q. You have reference to the graduation chart, do you?      A. That's right.

Q. Now in detail 2, is there reference to the characteristics of a part of the calibration chart?

A. Detail 2 essentially shows the length of the chart and its width.

Q. And there is some lettering?

A. That would be the strip that would have to be cemented on the two sides.

Q. There is some lettering indicated, is there not?

A. Numerals—80, 100, 120, 140, 160, 180, to appear thereon; also 20, 40, 60. Additionally the tanks are called out.

Q. In detail 4 is there any indication of how the other calibration charts would be characterized in some respects?

A. To clarify it further, Mr. Naylor, detail 2 covers Nos. 2 and 3 and No. 2 and No. 3 aux.

Q. "Aux," meaning what?

A. Auxiliary tank.

Q. Yes?

(Testimony of C. Martin Welch.)

A. No. 2 and No. 3 main—the tank again. Detail -4 is identical to -2, but for having the configurations that would appear, and also the tank column, number, and as 1 and 4 main, and 1 and 4 aux., and also positions the part number on the chart at a very definite particular place on the Nos. [441] 1 and 4 main side.

Q. Now, subsequent to your receipt—no, excuse me; I withdraw that.

Before I take that up I would like to ask you one question: Were you present when Mr. Chong testified in this case? A. Yes; I was.

Q. And you heard Mr. Chong give his testimony in reference to what was shown by the original vellum of this drawing? A. Yes; I did.

Q. And you heard Mr. Chong testify in reference to the print which he had treated by addition of red lines to denote differences?

A. That is correct; I have it.

Q. You were here? A. I was here.

Q. And I am referring specifically to Plaintiff's exhibit 26, which I hold now and exhibit to you?

A. Yes.

Q. I will ask you if you will examine Mr. Chong's print, Plaintiff's Exhibit 26, and state whether or not the characteristics of the cross-sectional part of the wood spacer or filler correspond in relation to Defendant's Exhibit P which you hold.

A. No; there's a definite difference. [442]

Q. And how do you interpret that difference?

(Testimony of C. Martin Welch.)

A. The right angle cuts on the opposite corners of the wood on Defendant's Exhibit P are very definitely right angle cuts as such—square cuts—and the grooves, shall we say, shown in detail -6 of Plaintiff's Exhibit No. 26 are radiused, indicating that this print, 9/1/48, was simply made to modify it to allow inspection department of Pan American to accept my dipsticks.

And there is a further change.

Q. May I ask you further in reference to the cross-sectional aspect of the wood, will you examine Plaintiff's 26 at the center portion of the drawing, at which point the cross-sectional characteristics of the complete assembly are shown? In what form is the wood filler indicated in that figure?

A. It is very definitely radiused.

Q. And now will you examine again Defendant's Exhibit P and state how that compares as to the cross-sectional aspect of the wood filler?

A. The opposite grooves are very definitely at right angle cuts, square cuts.

Q. Now, how do you interpret that, Mr. Welch, from the standpoint of the original vellum from which these two prints were taken?

A. Well, it's difficult for me to have—to understand [443] even now how Mr. Chong, by holding this print up to the light, was able to pick out only some of the phantom lines and how he missed the erasures, the phantom lines still appearing on this reproduction, which I don't know where it came from. The phantom lines are the original square

(Testimony of C. Martin Welch.)

cuts that appeared on the original vellum, and show a definite erasure in the radius on them.

Q. In Plaintiff's Exhibit 26?

A. Plaintiff's Exhibit 26. The phantom lines still appear showing the square cuts—which vellum would have a tendency to show throughout its life unless it was covered in the identical position with another pencil mark.

Q. And that definitely appears to you where on Plaintiff's Exhibit 26?

A. In detail 26 it is quite apparent that the phantom lines for the square cut that was originally on the vellum are there, and also in the center of the assembly detail, while it's not as easy to pick out, the phantom lines still do appear.

Q. I see. Now, you mentioned that there was another change?

A. Yes; there's quite a decided one, to further show that this print was introduced by the plaintiff as Exhibit No. 26, that it varied in some detail, and that is, on that vellum that Mr. Chong examined by holding it up to the light, he would not be able to pick out phantom lines wherein he had, [444] after his erasure, inserted printed words covering those phantom lines.

Q. Now, will you point that out to us, please?

A. That is on Plaintiff's Exhibit 26, the following: "Fill and seal both ends with cellulose acetate butyrate cement. Smooth cement flush with -8. Ends must be fuel-tight." In other words, the erasure on the vellum he could never pick out, I don't imagine,

(Testimony of C. Martin Welch.)

after having written over it, on the original vellum, of which this is a copy.

Q. You are referring now to Defendant's Exhibit P?

A. Defendant's Exhibit P. It says: "Seal both ends with AN-C141 cement." So then there was the addition of one word, "cellulose," on the first line—or two words. The words, "End sealed," were inserted there. And the AN-C141 cement was taken off of the vellum, I venture to say, on 9/1/48, as indicated by the change in the upper right-hand corner. The AN-C141 was taken off and acetate butyrate cement was inserted, again to conform with the part I supplied. AN-C141 cement has not been demonstrated here in court at all.

Q. It has not been demonstrated?

A. It has not been demonstrated here in the courtroom to date as a sealant for cellulose acetate butyrate. It is not, cannot be used.

Q. Now, on what do you base that [445] statement?

A. I have looked for quite some time for Army-Navy specifications C141, and it has been outdated, but the plaintiff introduced into court three process charts which I read rather thoroughly and determined that AN-C141 cement had to be AN-C specification—that specification had to be the specifications for making cement with an acrylate base monomer, and to clarify for the Court, and the chemistry of plastics that I have studied, I know acrylate base monomer to be nothing but unpoly-



(Testimony of C. Martin Welch.)

merized base acrylic. It is not lucite yet, it is an uncured, unpolymerized lucite material, and would in that state have no bonding or adhesive qualities whatsoever with cellulose acetate butyrate. The two materials are diametrically opposed to each other.

Q. Are they compatible in the sense of cementing or bonding?

A. Absolutely not. There is no way anyone can demonstrate to this Court a bond using an acrylate base monomer as an adhesive, because it is not an adhesive. What was demonstrated here in court, the application at this time, was simply the bonding of two surfaces with ethylene chloride, which again is called out in AN-C spec 141, and is a solvent for a number of plastic materials. But it is almost singularly and almost completely used today, and was in 1948, as an adhesive agent for acrylic material, not cellulose acetate butyrate.

Q. Now, give us some examples of acrylic material. [446]

A. There can be only two by trade name. They are known as lucite and plexiglass. It is methyl methacrylate, but by trade name it is known as lucite and plexiglass. There are only two companies that manufacture it—DuPont and Rhom & Haas.

Q. Rhom & Haas? A. Rhom & Haas.

Q. R-h-o-m and then H-a-a-s?

A. Right. And DuPont Company in Wilmington, Delaware. A very widely used product for a cementing agent, recognized as the very best you could find, is methacrylate, but not recognized at all as anything to be used on tenite. A poor bond

(Testimony of C. Martin Welch.)

which must be corrected, one that will initially stand up and one that will fail most definitely within a six months' period of time, or within a six months' period of time or approximately that.

Q. And the evidence of failure would be what?

A. Well, it has been tried by us in the plastic field, and one of the most recent applications was on window seals that were made out of cellulose acetate butyrate, and because the fellow who used them had a limited knowledge of what solvent to use, he probably referred—could have referred to a plastic identification chart wherein it states that one of the solvents for cellulose acetate butyrate is ethylene dichloride, and from that had gone [447] ahead on his own. But those materials failed in exactly, or within a few days of a six-month period. There is a definite crazing action develops and the bond disintegrates.

Q. The bond disintegrates?

A. Yes; it did in this case and it would be known to people who are quite conversant in the plastic field. It would happen not only in this case but in continuous cases so long as they formulate cellulose acetate butyrate as a material.

Q. Now you mentioned it would have a tendency to craze. What is your definition of crazing?

A. Crazing is minor cracks appearing on inner surfaces of plastics.

Q. Would such crazing in your belief affect a hermetic seal?

(Testimony of C. Martin Welch.)

A. It is the beginning of complete disintegration of the seal.

Q. And you would anticipate that that would take place in approximately six months, from your own experience?

A. From my own experience and through proven tests that we can point to, it is just about—well, it is an eight-month period now since, and it is rather fresh in mind, when the fellow by mistake or possibly because he referred to some chart that said it is a solvent for it, used it and found it failed in six months. [448]

Q. Yes. Now, coming back to Plaintiff's Exhibit 26, with particular reference to the statement on the drawing, "Fill and seal both ends with cellulose acetate butyrate cement. Smooth cement flush with -8. Ends must be fuel-tight." Insofar as cellulose acetate butyrate cement was substituted for the original government specification, do you interpret that as reflecting the work that you had done?

A. Well, that's another change.

Q. Introducing the sample?

A. Yes, I do. It is another change from the blueprint in order to be accepted by the inspectors. The print should conform with the part delivered and vice versa or the inspectors, I would imagine, are not allowed to receive it.

Q. Now, following your receipt of the June 10, 1948, communication from Pan Am and the print here identified as Defendant's Exhibit P, did you

(Testimony of C. Martin Welch.)

receive a purchase order from Pan American for the dipsticks or a quantity of them?

A. Following that receipt of that, I did, yes. It was on or about the 24th or '5th of June that the purchase order came in. The date, I am quick to say, is established by correspondence. I would have no way of remembering it otherwise.

Q. I show you what has been offered here as Plaintiff's Exhibit 2 for identification—I beg your pardon, that is a deposition identification. It is Plaintiff's Exhibit 11 [449] on trial. I will ask if you are familiar with that?

A. This appears to be a photostat of the purchase order, the initial purchase order that I received.

Q. Is the quality stated?

A. Calls for 100 each.

Q. And is there an identification of a drawing?

A. Calls for 100 each, gives a class number and then it gives a part number, 32- or point, rather, 061.114.

Q. And do you identify that drawing according to your present recollection as being Defendant's Exhibit P, namely, one of the prints?

A. It is extremely unlikely that I received this purchase order without also receiving a duplicate copy of the drawing I was given or that was sent to me on June 10th. It is possible they may have just sent the purchase order, but normal procedures on an airline, particularly on initial procurement,

(Testimony of C. Martin Welch.)

would be to attach this purchase order to a drawing or attach a drawing to this purchase order.

Q. That's for identification, is it?

A. That's quite common procedure in the business I have had for eight years with the airline business.

Q. Now, does Plaintiff's Exhibit 11, which you hold, indicate when delivery was expected?

A. "Delivery, one month," which would indicate that I was supposed to have produced the parts for Pan American on or [450] before July 21, 1948.

Q. And upon receipt of that purchase order, what did you first do, as you recall it?

A. This purchase order would have given me authority to know that I could sell parts that I would have to order to make it. So I am sure that I would have initially ordered the tubing required to make it up and the wood required to make it up.

Q. Now, with respect to, let us take the wood first, had you done anything toward finding an available source of wood fillers of the characteristics that you wanted prior to receipt of the purchase order?

A. Yes; we had. Mr. Klein, in having the first samples on his saw, making the first sample cuts on his saw—we found that cross-section to be somewhat lame, shall we say—certainly not strong enough to support battering around. And I have no record on which to establish a date, so I can only say sincerely that some time, could have been a day after I went over to Pan American with the sample, certainly some time between that period and, let's



(Testimony of C. Martin Welch.)

say, the initiation or receipt of the purchase order, a discussion took place with Mr. Klein and myself on this wood piece, and it was at his suggestion that we seek a mill to give us radiused wood, which we did on or about the 24th, 25th, 26th or 27th of June—some later day. [451]

Q. I see. And——

A. When we were talking about this, the reasons for ordering the wood, he recommended Fink & Schindler to me, because he had been doing work or had obtained patterns of their work from them or something. He was aware of their milling facilities.

Q. Now, is Fink & Schindler in existence today, according to your understanding?

A. I believe they still are in existence today. I have had no occasion to go to them after that initial visit, because they were not interested in the quantity I wanted.

Q. And you said before——

A. I believe that I have driven some time in the last, say, year or so—driven down that particular street that they may be located on. It is Bryant or Brannan, I am reasonably sure, not too far from Third and Townsend, and I have seen the name Fink & Schindler.

Q. Now, you said before that Fink & Schindler referred you to Schafer's Mill?

A. That's correct.

Q. Did you then go to Schafer's Mill?

A. Immediately, that same morning that I contacted Fink & Schindler. But Schafer's Mill was



(Testimony of C. Martin Welch.)

just a couple of doors, as I recall, down the street or through the alley or across, in the very close proximity to the Fink & Schindler address. [452]

Q. I show you at this time what purports to be a statement from Schafer's Mill dated July 26, 1948, and will ask you if you can identify that?

A. I recognize my own handwriting on this and can identify it, yes.

Q. And your own handwriting signifies what, in this instance?

A. Paid on August the 5th, 1948, by check No. 271.

Q. And to whom is this bill addressed, Mr. Welch?

A. Plastic Process Company, Inc., at the address of my office at the date.

Q. And what items does it cover?

A. 500 lineal 1 by 1 to pattern, which would indicate 500 lineal feet of wood to a particular pattern.

Q. And do you recall what the pattern was?

A. Yes, I do; very vividly. It is the present pattern we are using and which was introduced as an exhibit in the court, the square wood with opposite corners rounded out in a grooved manner.

Q. Can you state of your own recollection that it was a pattern that called for a piece of wood with a cut corresponding to Defendant's Exhibit N?

A. It was exactly identical to Defendant's Exhibit N, but I definitely recall that it was manufactured out of another material, I believe either

(Testimony of C. Martin Welch.)

Port Orford cedar or pine. I [453] believe that might be ash there. You would have to examine it more closely. That looks like ash. For the quality of wood, it is identical.

Q. Except for the difference in wood?

A. Right.

Q. A possible difference in wood.

Mr. Naylor: Now, I will offer that Schafer's bill as Defendant's next in order, your Honor.

The Court: Let it be received.

The Clerk: Defendant's Exhibit Q.

(Whereupon, invoice from Schafer's Mill, referred to above, was received in evidence and marked Defendant's Exhibit Q.)

Q. (By Mr. Naylor): I next show you what appears to be a receipt of some kind dated July 26, 1948, and will ask you to identify it if you can?

A. Yes; I can identify this as a bill from the Butler's Special Delivery Service. It would indicate that they picked up from Schafer's Mill at 734 Bryant Street, and it says, "C. L. Schafer." He was the fellow I was dealing with at that time. And "Deliver to the Independent Press Room. See Frank Burke," at 300 Broadway, it is.

Q. Do you have any knowledge of your own as to what Butler's Special Delivery was picking up on that date?

A. It was the wood I ordered at Schafer's before. [454]

Q. And can you tell us why Butler's Special

(Testimony of C. Martin Welch.)

Delivery Messenger Service would be picking up the wood at Schafer's Mill?

A. Because I didn't have an automobile at the time.

Q. And——

A. I had no way of getting it over there to Independent Press Room.

Q. And for what purpose were they delivering it to Independent Press Room?

A. Frank Burke, who printed the initial charts for us that were used on the initial order only, felt that the girl in his bindery would be more adept at cementing the paper onto the wood for me, so he offered to do that for a charge, for a nominal fee, to cement the paper charts that he had printed, which were  $35\frac{1}{2}$  or  $35\frac{5}{8}$  inches long—I think they were  $35\frac{5}{8}$  inches long. They are quite cumbersome to put on, as I recall. I watched the girls doing the first assembly, and we were trying several adhesives to use, and I delivered one of the adhesives to his bindery and observed the girls assembling the paper on the wood.

Q. And that was the purpose of Butler's pickup?

A. That's correct.

Mr. Naylor: We will offer that as Defendant's next in order.

The Court: So ordered. [455]

The Clerk: Defendant's Exhibit R in evidence.

(Whereupon, receipt from Butler's Special Delivery and Messenger Service, referred to

(Testimony of C. Martin Welch.)

above, was received in evidence and marked Defendant's Exhibit R.)

Q. (By Mr. Naylor): Now, aside from the inquiry as to procuring the wood from which to fill the Pan American order, you mention that you ordered the tubing. I will show you what has been marked here as Defendant's Exhibits K and L for identification and will ask you, Mr. Welch, if you can tell the Court what those documents are.

A. These copies, dated June 23rd, the one is a—my copy, my file copy of a letter to Ted Kerr and Harry Wenk, and it states, "I enclose my order for tubing for the job," for the particular Pan American dipsticks.

Q. And is the other document a copy of the actual order, Mr. Welch?

A. This I recognize again as being one of the pieces of paper I picked up in 1953, I believe, when I went to Los Angeles to search for the drawing that had caused so much confusion with Mr.—with Pan American.

Q. Does that account for your possession of the original of the order? A. That's correct.

Q. As distinguished from the file copy? [456]

A. That's correct.

Q. Do you have a file copy of it?

A. I am not sure whether I do have. Possibly if I did have, I turned it over to you.

Q. In any event, you can identify that as the original? A. This is the original order.

(Testimony of C. Martin Welch.)

Q. I note that——

A. I recognize one item on here that indicates further I was in pretty bad financial circumstances at the time—under “terms” here, I say, “Special house account,” and then I go through the normal finger punches of the typewriter, the numeral signs, the dollar sign, and stars and so forth, to indicate to my people in Los Angeles undoubtedly that I wouldn’t be able to pay for it very soon.

Q. Now, those documents are dated when?

A. They are dated June 23.

Q. I call your attention to the fact——

A. With no year on them.

Q. ——that there is no year date on it. Can you fix it as to a year?

A. It would definitely be, they were filed in the 1948 files along with the drawings that were dated, and, I guess, I wasn’t too good a stenographer at the time.

Q. Did you type those yourself?

A. Yes; I did all my own typing until well into 1952. [457]

Mr. Naylor: We will offer those as Defendant’s K and L, your Honor.

The Court: So ordered.

Mr. Naylor: They having previously been marked for identification.

The Clerk: Defendant’s K and L in evidence.

(Whereupon, Defendant’s Exhibits K and L for identification only were received in evidence.)

(Testimony of C. Martin Welch.)

Q. (By Mr. Naylor): Now, I direct your attention specifically to Defendant's Exhibit L as to the quantities stated, and I note that 115 pieces of one type of tubing was specified, is that correct?

A. That's correct.

Q. And how many pieces of the other?

A. 230 pieces of the round, smaller one-quarter.

Q. And is this the tubing that was ordered by you for the special purpose of filling the Pan American order?

A. It represents an additional quantity over what I was required to supply to Pan American. I can recall that I did want some extra pieces for samples to send to possibly other airlines for sale.

Q. Does that account for the odd figure?

A. That's correct.

Q. I show you now, Mr. Welch, what purports to be another communication from you to Mr. Wenk and will ask if you can [458] identify that?

A. This would represent itself as my office copy of the letter I wrote to Mr. Wenk.

Q. And will you examine that and in the interests of time I direct your attention to the last paragraph and state whether or not there is any reference to the order that you had placed for tubing?

A. Yes, there is. Would you like me to read it?

Q. I am merely interested in the significance of the reference there. What was the purpose of that reference?

A. That I—that Pan American was requesting



(Testimony of C. Martin Welch.)

delivery by July 21st and asking them when I could expect—could I expect the tubing, receipt of the tubing in time to fabricate it into the dipstick.

Mr. Naylor: I see. Thank you. We will offer that for its sequential value as next in order, your Honor.

The Court: All right, let it be received.

The Clerk: Defendant's Exhibit S in evidence.

(Whereupon, letter from Welch to Wenk, dated 6/23, referred to above, was received in evidence and marked Defendant's Exhibit S.)

Q. (By Mr. Naylor): I show you next a communication dated June 28, 1948, which purports to be a letter addressed to you, and will ask if you can identify that?

A. Yes; this would be taken from my files and is a letter [459] from Los Angeles, the secretary of Plastic Process Company.

Q. And signed by whom? A. "Joan."

Q. Is she one of the secretaries?

A. She was for quite a few years around that period.

Q. And is there a reference in this particular communication to any communication that had been written by you and in the interest of time, I suggest that you—— A. Yes.

Q. ——see the top of the letter.

A. Says: "Subject: Your letters, June 23 and 25th."

Q. And this communication——

(Testimony of C. Martin Welch.)

A. Under the subject bracket.

Q. And this communication is dated what?

A. June 28.

Q. What year?           A. 1948.

Q. And does this contain a reference to the dipstick?

A. Yes; it does. It says: "Re: Pan American Dipstick." And then it says, "This order will be shipped this week." Want me to continue?

Q. No; that's all right; that's enough.

Mr. Naylor: We will offer that as next, your Honor, Defendant's next.

The Court: Let it be received. [460]

The Clerk: Defendant's Exhibit T in evidence.

(Whereupon, letter from Plastic Process Company to Welch, dated 6/28/48, referred to above, was received in evidence and marked Defendant's Exhibit T.) [461]

\* \* \*

Wednesday, February 29, 1956

C. MARTIN WELCH

resumed the stand.

Direct Examination  
(Continued)

By Mr. Naylor:

Q. I show you Plaintiff's Exhibit 10 and will ask if you are familiar with that, sir?

A. Yes, sir.

(Testimony of C. Martin Welch.)

Q. What is that?

A. That is a quotation written or typewritten by me with my signature on it, dated June 7, 1948, addressed to Pan American Engineering Department, attention Mr. Grindle, for 300 dipsticks complete per sample submitted but with printed scale, \$3.00 each.

Q. To what sample was reference being made in that document?

A. Most definitely to the only sample I ever furnished Pan American prior to the delivery of the first parts, the sample that I delivered to them on the 14th—approximately the 14th of May of 1948.

Q. That is the only sample you submitted?

A. That is the only one I could make at least until July; I had only one set of tubing sent up to me from Los Angeles.

Q. What interpretation do you place upon the phrase, "But with printed scale"?

A. The sample submitted did not have a printed scale on it; it was just the wood core and the two pieces of one-quarter [462] inch round tubing in one piece of three-quarters inch square tubing.

Q. This had reference then to a supplement to the sample you had submitted?

A. "But with printed scale"—I knew one had to go on there, on the order, the particular calibrations for which were furnished me on the 10th of June.

Q. I show you again Defendant's Exhibit P and

(Testimony of C. Martin Welch.)

directing your attention again specifically to the characteristic of the wood filler which I think you identified yesterday as being square to accommodate the tubes—— A. That is correct.

Q. Did you ever make a drawing which was actually in accordance with the disclosure on that print insofar as the characteristic of the wood was concerned?

A. I caused one to be made; I didn't make one myself.

Q. You did? A. Yes.

Q. When?

A. Some time after we had made the original assembly on May the 12th or 13th and delivered it on the 14th to Pan American and prior to a decision that was reached by us to go into radiused wood, which I can only calculate as being somewhere in early June because the wood was ordered with the radius on it in late June. [463]

Q. In late June? A. Yes.

Q. That was from Shafer's Mill?

A. That would be wood ordered from Shafer's Mills, the invoice for which we produced.

Q. Yesterday we were speaking of the Pan American order for 100 dipsticks. What were the characteristics of the wood employed in that order?

A. Advice of that order was received in the June 10th letter but that order wasn't received until the 23rd of June, but square cut wood was specified on the drawings that were attached to the letter of June 10th.

(Testimony of C. Martin Welch.)

Q. And in filling that order, did you use the Shafer Mill radius cut wood?

A. Most definitely.

Q. I would now like you to tell us about the makeup of the dipsticks in filling the initial Pan American order for 100. Will you start with a description of the characteristics of the stick?

A. I received the wood from Shafer's Mill in latter July and sent it over to the Independent Press Room, San Francisco, their bindery, so that the women employed there could cement the paper on the wood. The hundred odd parts involved were delivered to my home by Mr. Burke, who is one of the partners in the Independent Press Room, approximately the first part of [464] August. I then assembled the wood cores with the paper charts cemented on them into the plastic tubing, and having spent the better part of July and the first several days into August trying to perfect a method of sealing the ends, we finally settled on a cellulose acetate butyrate—I should say I finally settled on cellulose acetate butyrate cement. And I would judge from correspondence that has refreshed my memory as to the dates, on or about the 8th or 9th or 10th of August we completed our initial parts. I do not recall this as being true at all, because I still like to feel that I didn't complete the parts until the 21st, 22nd or 23rd of August, but receiving records at Pan American that were produced by the plaintiff show delivery of 54 such parts. At any rate, I remember a good deal of trouble in distor-

(Testimony of C. Martin Welch.)

tion of the ends of the dipsticks because I was filling them with a mass bulk type of cement, and when the solvent contained therein would evaporate out, the bulk factor would reduce as much as four and five to one, leaving a big shadow.

So I would refill these shadow ends, and as I would refill them and the cement solvent would escape from the cement I was using, it would draw more tightly in towards the center to opposite corners of the dipstick so that the first parts I delivered were considerably distorted on the [465] ends.

Q. I would like to show you what was originally marked as Defendant's Exhibit H on your deposition and offered here as Plaintiff's Exhibit 18, and will ask you if that is a sample of a dipstick with the ends sealed in the manner that you have just been speaking about.

A. I have a very positive reason to believe that this particular stick, Plaintiff's Exhibit 18, is one of an approximate 40 odd sticks that I replaced in latter October or early November of 1948 with sticks with a much more finished looking end. That was an agreement I made with Mr. Grindle when I delivered the first parts on the initial order and they were badly distorted—many worse than this.

Q. Is Plaintiff's Exhibit 18 badly distorted?

A. I would say that today were I to produce an item like that my customers would probably reject it—undoubtedly reject it.



(Testimony of C. Martin Welch.)

Q. And what characteristic of the stick leads you to believe that?

A. The misshapen ends of the dipstick are not a neat, fashionable looking product; probably it was only worth at the time four or five dollars, or three dollars, because it didn't look nearly as well as the finished products we make today.

Q. What about the function of the stick, Plaintiff's Exhibit 18?

A. It could function providing this was one of the group [466] that didn't leak. We were not successful in getting a good bond with this matter either.

Q. You were not? A. No; we were not.

Q. Will you tell us something about the time factor, Mr. Welch, that was involved in attempting to seal the ends in this fashion? How much time did it take?

A. I would say that we applied ourselves quite directly on this one problem, it being the one that took us longest to accomplish. We could get the wood all right, we obtained the tubing and got the paper to put on the wood, but we didn't get them sealed satisfactorily until October or November, 1948. So I would say I worked on this particular problem quite extensively during latter July and early August, and then after processing the order for Pan American for the first hundred sticks during the month of August and after having made final delivery of the 100 sticks on or about the 28th of August, we concentrated on developing—I again

(Testimony of C. Martin Welch.)

—I use the expression “we” rather frequently, but I intend to mean myself—concentrated on developing a more satisfactory manner of sealing these ends.

Q. I take it at the initial delivery some of the sticks were reasonably good or good?

A. They were accepted because they were wanted badly. I would rather say it that way. Seven of them were rejected, [467] and quite oddly, on the rejection slip today appears the words, “Rejected because of the variation in calibration paper scales being placed on the dipstick.”

Q. Was that your understanding at the time?

A. The first rejection I had from Pan American Airways for that reason was long after that time—several years afterwards. The reason for it was that we were—after this initial order—the printing plate was 36 inches long that produced the particular chart that is on this dipstick.

Q. The plate itself was 36 inches long?

A. The plate itself was 36 inches long and it produced on a slip of paper 35, approximately, and a half inches long and we laid it on the wood. The wood was  $35\frac{1}{2}$  inches long—or  $\frac{5}{8}$ ths inches long, to be exact, the same length as the paper. The paper was laid on the wood starting from the bottom of the wood and working upward to the top.  $\frac{3}{16}$ ths openings remained on each end of the dipstick; they were filled with cement so that there could be no error in calibration of the stick on assembly.

(Testimony of C. Martin Welch.)

Later we used a multilith method to print our paper charts.

Q. Multilith?           A. Multilith.

Q. That is a lithographic process of some kind?

A. Lithographic process, and because of the limitations of [468] the machine—press—we were only able to produce slips of paper approximately 12 inches long, so we had six slips of paper then to place on one dipstick. So we would start with the first piece of paper from the bottom of the stick and paste it on. If you were not minutely careful in laying the second piece of paper on and you would go a fraction of an inch, let's say, upward with the second strip of paper—let's say an eighth of an inch upward, and then you laid on the third piece of paper and you were another one-eighth of an inch upward in laying this piece of paper on; and on this side as you started up the stick and you laid your first piece of paper exactly flush with the end of the stick, the second piece of paper probably an eighth of an inch downward from where you should put it and the third piece of paper probably an inch downward, then your net result would be a basic calibration where the two pieces of paper up to this particular distance were, the top part of the bottom pieces of paper, the calibrations would be exact; but on both sides of the stick, this side and this side, you would have a downward variance on one and an upward variance on the other in the middle section and the top section.

Q. That posed a problem, did it not?

(Testimony of C. Martin Welch.)

A. Yes; it did that.

Q. Did you eventually correct that problem?

A. We have corrected it since. [469]

Q. How?

A. We very shortly after—you shouldn't say we have corrected it since; we do our best to hold it within tolerances today. Shortly after use of the three pieces of paper, which were giving us trouble in laying them in the right positions, we went to two pieces of paper. We found a large multilith press that would print paper 17 inches long and which we used for that paper.

Q. 17 inches?

A. 17 and a fraction inches long.

Q. So you have a problem now of two pieces of paper?

A. We have only a problem now of two pieces of paper, and we take, and have for quite a few years now, have taken great pains to have imprinted on the lower slips of paper guide marks, so that now our problem is in the people that assemble these pieces of paper and the wood—it gets very tedious during the course of a day and they get lax during the process and they may lay a strip of paper down too far on the guide mark. The result, fortunately, would effect a reading lower than what was actually in the tank by possibly one or two or three gallons were we to use a figure off one-eighth of an inch. I doubt if it would be feasibly possible for anyone to believe that we could get off much more than an eighth of an inch because you would have too big

(Testimony of C. Martin Welch.)

a gap on top of it and you would know you were off. [470] One-eighth of an inch on probably the largest tanks of the airplanes would represent a fraction of a gallon or maybe a gallon at the most in a 700-gallon tank.

Q. I would like to ask you about the length of time that you found it took you to seal one of these sticks with the butyrate cement.

A. Well, we would, or I was required to go back to each and probably three or four times to get enough body to fill up into the ends. The drying period was possibly eight to twelve hours for each application. So the total period spent in making one individual dipstick—of course, I put a little layer of cement in probably 50 or a hundred of them, then I would go back, say, later that evening, and put another layer of cement; probably three or four days to just get cemented one particular end.

Q. Even doing it with that care, you got distortion at the ends; is that correct?

A. Yes. Of course, the more goop or cement you would put in at one time the quicker the distortion and greater the distortion. So we actually put thin layers in.

Q. Did you consult with any people in the plastics business concerning this sealing aspect of the matter?

A. Quite a few of the supposed experts around town—Ferdinand Kebely of K-Plastix, remembers well the conversations with me, my coming to him with this problem. He doesn't [471] remember the



(Testimony of C. Martin Welch.)

date. Lou West, one of the vice-presidents of Wilson and George Meyer & Company, who is recognized around the Bay Area as quite a plastics expert, remembers well my coming—remembers furnishing me with cellulose acetate butyrate sheet stock for my first plugs that I started to laminate, along about September or October of 1948. Mr. Rollins was in on the initial phase of the problem and has testified here. And possibly one or two others.

Q. What about Plastics Process Company? Did you seek their assistance in the solution of the problem?

A. I asked Mr. Kerr, but I don't recall of ever been given or receiving from him any advice that I used, if any at all.

Q. And did Mr. Wenk make any suggestions?

A. Not that I recall.

Q. When was it that you came upon the idea of using lamination?

A. It would possibly be in September of 1948 to delivery of the first parts to Pan American. It certainly couldn't have been before; it would have to be after.

Q. Will you tell us something about how you got under way with the lamination type of seal?

A. It is difficult for me to remember just at what point we actually started making plugs. I know that upon receiving, approximately in September or early October—likely in latter September of 1948—upon receipt of this sheet material [472]



(Testimony of C. Martin Welch.)

from Mr. West of Wilson and George Meyer Company, I caused to be made a steel rule die the shape of the outline of the wood and current shape of the plugs we are using today. With this steel rule die which was run on a roll-type press—actually, it was a rubber stamp manufacturer that cut out the first initial plugs out of this sheet stock for me, down on Washington Street, as I recall—then we made this steel rule die and we cut out several hundred plugs and we tried those and they worked.

So the next step was to cause to be made a punch press die.

Q. Of what stock or material were you cutting these plugs?

A. Cellulose acetate butyrate stock.

Q. And on the order of that thickness were the original trial plugs cut?

A. They were approximately 20 to 30 thousandths, as I recall; somewhere in between 15 and 30 thousandths—very thin.

Q. Mr. Welch, I show you at this time what purports to be a plastic plug of some sort and will ask you if you can describe that?

A. This appears to be one of the initial plugs we stamped out of sheet stock approximately 20 thousandths thick.

Q. And was that plug actually tried in the sealing of a stick, or that type of plug? [473]

A. This type of plug was attempted and——

Q. With what results?

A. Satisfactory to a point.

Q. And what do you mean by that?

(Testimony of C. Martin Welch.)

A. Well, we determined that we could double or even triple the thickness of these—double the thickness, I would say, and succeed with possibly three to four laminations in the end of each plug and have as good a seal as with eight laminations.

Mr. Naylor: We will offer that little sample as defendant's next exhibit.

The Court: So ordered.

The Clerk: Defendant's Exhibit U in evidence.

(Whereupon, sample referred to above was received in evidence and marked Defendant's Exhibit U.)

Q. (By Mr. Naylor): I show you another plastic plug sample and ask you if you can identify that?

A. This appears to be of the thickness we are presently using today.

Q. I notice this one happens to be transparent. Do you use any colored plugs?

A. We have no particular reason for using transparent plugs; they could be any particular color so long as the material was cellulose acetate butyrate. [474]

Q. In that connection I will show you one that appears to be colored and I will ask you if you are familiar with that?

A. Yes; this is a plug we used several years ago, or had run several years ago out of rather thick material, and it didn't prove too satisfactory.

(Testimony of C. Martin Welch.)

Q. It did not prove too satisfactory. The clear one is typical of your typical vintage plug?

A. That is right.

Mr. Naylor: We will offer the transparent one as the defendant's next, your Honor.

The Court: Let it be received.

Mr. Naylor: And a colored one as defendant's next in order.

The Court: Same order.

The Clerk: Defendant's Exhibits V and W.

(Whereupon, plastic plugs referred to above were received in evidence and marked, respectively, Defendant's Exhibits V and W.)

Q. (By Mr. Naylor): Mr. Welch, what type of cement do you presently employ in sealing the ends of the dipsticks in commercial practice?

A. It is a cement, Mr. Naylor, that I make myself. If the Court wishes I would perform how I make it, but I wouldn't like to divulge it.

Q. Do you preserve it as a trade secret? [475]

A. Yes, sir.

Q. And has that been true since you came upon the particular formulation that you now employ?

A. It was a discovery of my own. I went to many people for help. It was a discovery of my own. I am the only one that makes it and I am the only man that has ever made it, as near as I know.

The Court: I don't think there is any necessity for going into the essence of the formula.

Mr. Naylor: I thought we should divulge the

(Testimony of C. Martin Welch.)

present status of it as a trade secret, so that your Honor would be informed as to why we did not forthrightly divulge it.

The Court: All right.

Mr. Naylor: If the Court please, I am endeavoring to cut this down a lot. I have a lot of documents. Mr. Swain and I discussed the possibility of some stipulation with respect to the final phases of Mr. Welch's testimony and I gave considerable thought to that last night, but I was unable to come up with any stipulation that would seem to serve the purpose. And what I am endeavoring to do this morning is to take key topics and the points that should be brought out to your Honor's attention and examine Mr. Welch with respect to them. And in that process I am eliminating a lot of detailed examination concerning some of these exchanges of correspondence and things of that nature. [476]

Q. Mr. Welch, I call your attention to what purports to be the office copy of a communication dated August 28, 1948, and will ask you to examine that and identify it if you can?

A. I recognize this as my copy of a letter written to Harry Wenk of Los Angeles.

Q. Is there reference there to the matter of dimensioning of the parts of the dipstick?

A. Yes. Tolerances—is that what you have reference to?

Q. Yes. Is there a reference to an enclosure of any kind in that communication?

A. I state I will send them down with this paper

(Testimony of C. Martin Welch.)

cemented on for use as a check gauge, and further that I must have a real snug fit.

Q. I direct your attention also to a document dated August 28, 1948, and will ask if you can identify that?

A. This is a purchase order we speak of in the letter here on the first line saying, "Need the enclosed, or, rather, a partial shipment of same at your earliest convenience." The order is for 3,000 feet of three-quarter inch square tubing and 6,000 feet of one-quarter inch round tubing.

Q. Does this appertain to the first tubing ordered by you after the initial order to Plastic Process Company?

A. This was ordered before I received any further orders from Pan American, but I had made a commitment to Mr. Grindle that I would replace all of the dipsticks remaining in his [477] stock that I had delivered that had the distorted ends as soon as possible, and I succeeded in doing it only in latter October.

Q. I note the quantity here. Does that bear any relation to the commercial development or extension of the commercial development?

A. We were—I was promised through Mr. Grindle by Pan American that they would immediately process another order for dipsticks for us, for one or two hundred. And when I received that order I am not sure, but I ordered that tubing on the strength of having to replace what I had committed myself to replace at Pan American plus an amount

(Testimony of C. Martin Welch.)

to take care of the promised orders from Pan American.

Mr. Naylor: We will offer the communication, your Honor, as defendant's next.

The Court: It will be received.

The Clerk: Defendant's Exhibit X in evidence.

(Whereupon, letter referred to was received in evidence and marked Defendant's Exhibit X.)

Mr. Naylor: And the purchase order as the next in order.

The Clerk: Defendant's Exhibit Y in evidence.

(Whereupon, purchase order referred to was received in evidence and marked Defendant's Exhibit Y.)

Q. (By Mr. Naylor): Mr. Welch, was it your practice to affix your name to the dipsticks of your manufacture? [478]

A. From the beginning.

Q. And how did you do it in the beginning?

A. I rubber-stamped them on the first—on the first orders that were delivered to Pan American the name was rubber-stamped on.

Q. In that connection, I will show you what purports to be a statement dated August 5, 1948, from Kaus Rubber Stamp Company, and will ask if you can identify it? A. Yes, I can identify it.

Q. Is there any reproduction of the rubber stamp on that particular invoice copy?



(Testimony of C. Martin Welch.)

A. Yes; the invoice is for three rubber stamps and it has been and today the practice of Kaus Rubber Stamp Company to stamp on the invoice with the actual rubber stamps that he manufactures a copy of that stamp, and the copy of the three stamps reads: "Manufactured by C. Martin Welch, 55 New Montgomery Street, San Francisco." Another rubber stamp reads, "Fuel Tank Dipstick, an accurate measuring gauge." And a third reads: "C-54 Aircraft."

Mr. Naylor: Thank you. We will offer that, your Honor, as Defendant's next.

Mr. Swain: May it please the Court, I have no objection to this exhibit. I don't want to object because I want to get the case on, but I think that an answer such as the last one is subject to being stricken because it purports to state [479] the method of doing business of this rubber stamp company. I think all this witness can testify is when he got the bill it had the impression of the stamp on it. I don't think he could very well testify as to what their method of doing business is.

The Court: That objection may be good, but this exhibit speaks for itself.

Mr. Swain: I appreciate that, your Honor.

The Court: As far as the three rubber stamps are concerned, and the price, and the number, how you designate that—No. 0 stamp, No. Zero stamp, one zero stamp.

A. Excuse me. One No. zero stamp.

The Court: One No. zero stamp with the sales

(Testimony of C. Martin Welch.)

tag and the total price. It will be admitted for that limited purpose.

The Clerk: Defendant's Exhibit Z in evidence.

(Whereupon, Kaus invoice was received in evidence and marked Defendant's Exhibit Z.)

Mr. Naylor: But my offer was within that limited purpose, your Honor.

The Court: Yes.

Q. (By Mr. Naylor): Did you receive a second order from Pan American?

A. Yes; I did receive another additional order shortly after delivery of the first one.

Q. And I will show you here an invoice that purports to be [480] dated August 28th. Does that relate to the second or the first?

A. Oh, this particular invoice, the typewritten part of it relates to the initial order. I have made an entry in my own handwriting that covers the invoice of the second order, order for 100, and dates it as being November 15, 1948.

Q. November 15, 1948?

A. At the price of \$3.80 a dipstick.

Q. How were the ends of the sticks in the second order sealed, Mr. Welch?

A. With laminated plugs.

Mr. Naylor: With laminated plugs. We will offer that, your Honor, as defendant's next.

The Court: Let it be received.

The Clerk: Defendant's Exhibit A-1 in evidence.

(Testimony of C. Martin Welch.)

(Invoice of 11/15/48 was received in evidence and marked Defendant's Exhibit A-1.)

Q. (By Mr. Naylor): Who was the patent attorney you consulted in the matter of filing the application that resulted in the patent in suit?

A. Baldwin Vale.

Q. Do you recall approximately when you first consulted him?

A. I have not as yet been able to establish through memos or anything else the date of my first talk with Mr. Vale; I assume it to be the latter part of 1948. [481]

Q. The latter part of 1948?

A. I have no proof whatsoever in my files that indicates so; I have only a check written to him in the first part of 1949.

Q. I show you what purports to be a check dated February 7, 1949, and will ask you if you can identify that?

A. This is the cancelled check I just spoke of.

Q. And to whom is it payable?

A. To Baldwin Vale.

Q. And in what amount?           A. \$21.50.

Q. Do you recall what that was intended to cover?

A. I believe it was for a patent search—search charge—a patent search charge, I believe.

Q. What did you ask him to do when you originally went there?

A. To find out if my item was patentable and,

(Testimony of C. Martin Welch.)

if so, to proceed with a patent application on that item.

Q. What did you furnish Mr. Vale on the occasion of your first visit to his offices, if you recall?

A. To the best of my recollection, I would have taken him dipsticks in various stages of completion. I still at the time had not made production drawings of my various calibrated dipsticks. However, I recall taking him in a drawing that we made early in the history of the dipsticks covering the [482] type or manner which we at that time were using.

Q. Do you recall who made that drawing for you?

A. Yes; Louis Klein.

Q. Louis Klein, your neighbor?

A. Next door neighbor.

Q. Do you recall supplying Mr. Vale anything else at that time?

A. I gave him also—could have given him; I am not sure, Mr. Naylor. I could have given him drawings of United Airlines or a drawing of United Airlines and/or a drawing of Pan American Airlines of a particular dipstick and possibly a DC-6 or B-377 Boeing aircraft or C-54. It would have to be one of the three because they were the only three types of dipsticks we were manufacturing at the time.

Q. You have a belief that you may have given him one of such drawings; is that correct?

A. I am not positive. It would seem likely I would have done so.

Mr. Naylor: We will offer check, your Honor,

(Testimony of C. Martin Welch.)

as Defendant's next.

The Court: Let it be received.

The Clerk: Plaintiff's Exhibit B-1 in evidence.

(Whereupon, check dated 2/7/49 was received in evidence and marked Defendant's Exhibit B-1.)

Q. (By Mr. Naylor): Eventually you proceeded with an application [483] through Mr. Vale's office, did you not? A. Yes.

Q. Incidentally, Mr. Vale is deceased, is he not?

A. That is correct.

Q. He died some three or four years ago?

A. Four years ago, I believe; three or four years ago, 1951 or '52.

Q. Did he die before——

A. I believe he died in 1950—six years ago.

Q. Did he transmit the patent to you or did someone else?

A. No; Warren Gifford Hardy transmitted the patent to me and that was done—and that further convinces me that he must have died in 1950. That was done in either December of 1950 or January, 1951.

Q. Before the patent actually issued?

A. This is the issuance of the patent I am speaking of.

Q. Did you obtain from Mr. Hardy Mr. Vale's file on this application?

A. Recently or when we were into litigation on

(Testimony of C. Martin Welch.)

this case, well into it, I requested that file from Mr. Hardy.

Q. And is this the file that Mr. Hardy gave you?

A. That is the one.

Mr. Naylor: Your Honor, I would like to know that this is an office file history that dates back into the period when Mr. Vale had this matter in his hands and it was then [484] concluded by Henry Gifford Hardy as the file indicates. I would like to interrupt the interrogation of the witness on this particular point at this time and give this file intact to Mr. Swain and allow him to inspect it, because we have obviously not endeavored to reproduce a file of this character. But I do want eventually for this file to come in as an exhibit on behalf of the defendant because of the contents that are here. And if I may, I would like to interrupt the interrogation of Mr. Welch and give Mr. Swain ample opportunity to inspect the file and its contents.

The Court: All right. Do you want to do that now, Mr. Swain?

Mr. Swain: I can do it probably during the recess.

Mr. Naylor: I thought during the recess would be the best time.

Q. Mr. Welch, did you at any time apply to dipsticks of your manufacture a notice indicating the pendency of a patent application?

A. I did upon Mr. Vale's suggestion, I believe on the occasion of the first visit or certainly early



(Testimony of C. Martin Welch.)

in seeing him; he suggested I could stamp them, "Patent Pending."

Q. Did you follow that advice?

A. Yes, I did; on the dipsticks sold by me from the last half of 1948 on through—1949, I mean to say—on through the year 1950. Early in the year 1950 when I had completely [485] restocked all of the calibration charts I had previously been using, at which time the words "Patent Pending" were imprinted thereon; and upon receipt of the patent number in latter 1950 all charts shipped all airlines were imprinted "Patent number," and with the number on there.

Q. I would like to show you at this time another statement from Kaus Rubber Stamp Company, and I will ask you if you can identify that?

A. I can identify that.

Q. What is the date of it?

A. The date of it is July 19, 1949.

Q. And briefly, what does it cover?

A. Two rubber stamps. One that read, "Patent Pending," which is stamped on this invoice; and another that read, "Trade-mark" widely spread so that it would go on either side the call-out name of the dipstick, which we used as M.W. fuel tank dipstick.

Q. For what purpose was this stamp produced?

A. The trade-mark stamp was produced so that "Trade" would go on one side of the M.W. call fuel tank dipstick call-out and "Mark" would go on the

(Testimony of C. Martin Welch.)

other side. This was one stamp, while it appears on here that it is two—it was one long stamp.

Q. To what document or thing was this stamp applied?

A. To the internal paper charts that were cemented onto the [486] wood and contained in this square plastic tubing.

Q. Was this stamp used in relation to paper charts that had been previously printed?

A. This would be the stock of paper charts I had in existence at the time which would include, to the best of my recollection, only three different calibrations, calibrations for three different airlines, namely, DC-6 and the Boeing 377 and the C-54.

Mr. Naylor: May I offer that as defendant's next, your Honor?

The Court: Let it be received.

The Clerk: Defendant's Exhibit C-1 in evidence.

(Whereupon, statement of Kaus Rubber Stamp Company, 7/19/49, was received in evidence and marked Defendant's Exhibit C-1.)

Q. (By Mr. Naylor): You mentioned that the words "Patent Pending" were printed on the charts of the dipsticks. I will show you at this time what purports to be an invoice with certain charts annexed and I will ask you if you can identify that?

A. I can identify it.

Q. What is it?

A. An invoice—two separate invoices, each for 200 fuel tank dipstick charts.

(Testimony of C. Martin Welch.)

Q. Whose invoice is it? [487]

A. An invoice from Lawhern & Lubfin who did our printing for us.

Q. And the date of it, Mr. Welch, or the date of them? A. 7/15/49 and July 22, '49.

Q. Are there any charts annexed or coupled to the invoices?

A. Yes; these charts attached to them represent the two particular charts that were ordered at that time on the occasion of the first delivery of parts to United Airlines.

Q. How can you tell that?

A. I establish this because I recognize the calibrations contained thereon and the part numbers as those furnished us by United Airlines for those two particular aircraft, and our office records establish the date as being prior to the receipt of these invoices by just a few days.

Q. Now, do the printed charts——

A. These represent also, may I further add, the initial invoices ever received from this firm. Their records may even show that these were the first two jobs they ever ran for us; I am not certain.

Q. Do the charts bear the "Patent Pending" notice?

A. The charts in what I recognize as approximately 14 point type read, "Patent Pending," on the top four-inch title label area as we call it on the dipsticks.

Q. Is that in proximity to your name and address on the article? [488]

(Testimony of C. Martin Welch.)

A. Patent—the word “Patent” is on the left-hand side and within a quarter of an inch of the words, “Manufactured by C. Martin Welch & Company.” The word “Pending” is on the right-hand side, I would say, within a quarter of an inch of the word “Company.”

Q. Do you have any positive recollection as to whether or not charts thus printed were actually physically applied to dipsticks of your manufacture and sale?      A. Well, I know they were.

Q. You know they were?

A. They were the only charts we had to make the dipsticks with.

Mr. Naylor: We will offer that as defendant's next.

The Court: It will be received.

The Clerk: Defendant's Exhibit D-1 in evidence.

(Whereupon, invoices of 7/15 and 7/22/49 were received in evidence and marked Defendant's Exhibit D-1.)

Q. (By Mr. Naylor): After the transaction you have just been describing, was it your practice to cause the words “Patent Pending” to be imprinted on the charts used in the sale of sticks to other lines?      A. Yes.

Q. I hand you a sheaf of documents and will ask if you can identify them as a collective group?

A. I can identify them. [489]

Q. Just state briefly to the Court what they are without too much elaboration.

(Testimony of C. Martin Welch.)

A. The three separate parts—one is an invoice dated July 12, 1949; the second is a purchase order from Trans Ocean Airlines dated July 12, 1949; and the third is a chart used in fulfilling that purchase order.

Q. And does the chart bearing the patent pending notice?

A. The chart has "Patent Pending" on it.

Mr. Naylor: We will offer that, your Honor, as a further illustrative exhibit next in order.

The Court: Let it be received.

The Clerk: Defendant's Exhibit E-1 in evidence.

(Whereupon, group of documents referred to was received in evidence and marked Defendant's Exhibit E-1.)

Q. (By Mr. Naylor): Mr. Welch, following the issuance of patent, did you cause a different patent notice to be applied to dipsticks of your manufacture and sale?

A. Immediately following the receipt of the patent from Warren Gifford Hardy——

Q. You mean Henry Gifford Hardy?

A. Or Henry Gifford Hardy—we caused to be imprinted a duplicate stock of all the charts that we were then using, and upon receipt of same and within the next several weeks period we destroyed our old stock and we manufactured from that date forward all dipsticks with the patent number [490] on them to all airlines.

Q. Would that include Pan American?

(Testimony of C. Martin Welch.)

A. I would like to establish that the "Patent Pending" that was rubber stamped on the dipstick was meant to include all airlines, also Pan American.

Q. Also Pan American. Did the patent notice appear on charts affixed to dipsticks delivered to Pan American in fulfillment of their orders?

A. Yes; most definitely. They were the same charts for one particular aircraft by quite a few airlines. I would like to identify it as part No. MW2937 for the Boeing Aircraft.

Q. Boeing Aircraft? A. Boeing Aircraft.

Q. What particular airplane is that?

A. That is the B-377 Stratocruiser.

Q. Mr. Welch, I would like to show you a sheaf of documents and ask you if you will, as expeditiously as possible, identify those for the Court?

A. The two blue copies purport to be our shop packing slip made up to the Flying Tiger Line and dated January 16, 1951. The two white charts I identify as, one, our number 4008-B, which is the calibration chart for the C-54 aircraft, based on the calibration furnished us by Flying Tiger Airlines; and, second, part number MW4600-F, a calibration chart for the C-46 aircraft, and again based on calibrations received from [491] Flying Tiger Airlines.

I would further like to identify them as most likely the initial charts; they represent in our books the initial invoicing done that year, and they would



(Testimony of C. Martin Welch.)

then be the initial charts, we having received, they——

Q. Directing your attention to the charts, do they bear the patent notice?

A. They have on either side of the marking, "Manufactured by C. Martin Welch and Co.," with my address on it, the words "Patent" and then "No. 2534644."

Q. Do both charts bear the same notice?

A. Both charts bear the identical markings.

Mr. Naylor: We will offer that, your Honor, as defendant's next in order.

The Court: It will be received.

The Clerk: Defendant's Exhibit F-1.

(Whereupon, charts referred to above were received in evidence and marked Defendant's Exhibit F-1.)

The Court: We will take the morning recess at this time.

(Recess.)

Q. (By Mr. Naylor): Mr. Welch, I show you another sheaf of documents and ask you if you will very briefly identify those for the Court? [492]

A. Yes; I can identify them. The first is a packing list made out to Slick Airways, dated—there is no date on the packing list; there is a date on the Slick Airways purchase order, 1/16/51.

Q. And the other document?

A. The second is a letter dated January 17, '51,

(Testimony of C. Martin Welch.)

from Slick Airways, supplying us with the calibration date for the C-46 aircraft. The third is the second page of that letter, and the fourth is the actual chart that was produced from the calibration furnished us from the letter.

Q. Does that chart bear the patent notice?

A. That chart was part No. MW4600, bears the patent number 2534644 on adjacent sides of, "Manufactured by C. Martin Welch and Co."

Q. Did these two last exhibits mark the commencement of your use of that patent notice?

A. That would very likely be the third chart shipped during that year.

Q. And has it been your consistent practice to use the patent notice on the charts since that time?

A. It is on all charts and has been on all charts since the first—I would say since the month of January, 1951.

Mr. Naylor: I would offer this, your Honor, to illustrate that as Defendant's next.

The Court: It will be received. [493]

The Clerk: Defendant's Exhibit G-1 in evidence.

(Whereupon, chart and attached documents were received in evidence and marked Defendant's Exhibit G-1.)

Mr. Naylor: I understand, Mr. Swain, you have had an opportunity to examine Mr. Vale's file?

Mr. Swain: Yes; I have examined it and it all seems perfectly in order.

Mr. Naylor: Thank you. Your Honor, I don't

(Testimony of C. Martin Welch.)

want to—as a matter of fact, I don't have a witness since Mr. Vale is deceased and Mr. Hardy came into the picture quite late in winding up this patent application; but for the purpose of illuminating the defendant's evidence in this case, I would like to offer this file as a composite exhibit for reference purposes if the Court should care to examine it at any stage.

The Court: You have no objection to that, have you, Mr. Swain?

Mr. Swain: No, your Honor.

The Court: Let it be received.

The Clerk: Defendant's Exhibit H-1 in evidence.

(Whereupon, file referred to above was received in evidence and marked Defendant's Exhibit H-1.)

Q. (By Mr. Naylor): Mr. Welch, I should like to ask you about the answer in this case which, as you know, admits the invalidity of claim 1 of this patent. Will you tell the Court [494] briefly why that admission was made in the answer, what led to it?

A. Mr. Naylor, you recall you advised me to—upon receipt of this complaint and the allegations made therein and talking over them, you advised me to make a very diligent search to come up with proof of delivery of the first parts. I had informed you at the time that I had delivered the first parts on the 28th of August. I based that information or that statement completely and wholeheartedly on an

(Testimony of C. Martin Welch.)

invoice date for 100 dipsticks dated August the 1st—August 28th, rather, and which we have submitted as an exhibit.

During the year 1948 and the previous several years and the following year or two, my financial condition was such that we needed at all times all possible monies we could possibly obtain as soon as we could obtain them. Particularly in 1948, I am not a bit ashamed that our gas meter was shut off by the gas company, our milk supply was cut off by the Golden State Milk Company. I mention that because I further want to stress how hard up, shall we say, I was for money. Having in my records at the time this litigation was started no other proof to refer to as to the delivery of the dipsticks but the invoice copy, and having since 1948 to this very day invoiced all orders—I will say right now all orders—on the day I shipped them or the day after—the day following, I was quite confident then that I would not be able to come up [495] with any date other than August date as the delivery date of the first parts. And I went to set about to make a very diligent search for the proof required further than the invoice, hoping against hope I wouldn't find any, and upon a visit to Pan American, I examined a microfilm record. They could produce no receiving copies; they stated that all copies of 1948 were destroyed long before that, or some time before that. And from this microfilm I found the delivery of the partial shipment of '54 parts was apparently effected by me on the 12th day of August.

(Testimony of C. Martin Welch.)

Q. 12th of August, 1948?

A. 1948. And I was quite disheartened about it, and I phoned you the information in a humble confession to you that I had to be wrong.

Q. And we directed your attention, did we not, to the fact that the patent application had been filed by Mr. Vale on August 17, 1949?

A. You did that, and it wasn't until I received the complaint from the plaintiff that I knew that you had to apply for a patent within one year after——

Q. You say you didn't know that?

A. I did not know it. It wasn't until the date of the filing of this complaint that I learned that you had to file within one year after submittance or delivery of the first parts. [496]

Q. Did you have any conversation at all with Mr. Vale concerning this one year permissible public use factor?

A. No, I didn't.

Q. At any time?

A. No, not as I recall.

Q. Did you have any conversation with Mr. Hardy about it?

A. No, I have never to this day seen Mr. Hardy. I have talked to him only on the telephone and that is when we were winding up the patent.

Q. Now you say that the microfilm—by the way, did you see the microfilm personally?

A. Yes, I personally viewed it through a viewer they have out there.

Q. They exhibited it to you?

A. Yes.

(Testimony of C. Martin Welch.)

Q. And I assume you then reported those facts back to us as counsel?

A. Immediately I drove into the city with the sad information, yes.

Q. And it was on the strength of those findings then that the invalidity of claim 1 was admitted; is that correct?

A. You told me that we had no chance to save it; I had delivered parts one year and five days after—let's say had delivered parts on August 12th of 1948, and the patent application filing date was August 17th, 1949, and the five [497] days then loomed to such great importance that I, upon your advice, signed a disclaimer of the patent—agreed to sign, shall I say, a disclaimer.

Q. This related, did it not, solely to the initial delivery of 54 of the items?

A. The first 54 parts that were delivered, yes, of which seven were rejected, so it related to 47 parts.

Q. And just so there will be no misunderstanding about that, the first 54 dipsticks delivered to Pan American were constructed in accordance with Plaintiff's Exhibit 18 that you have been examining here insofar as the ends were sealed with a cement?

A. Yes; I can even say that this particular dipstick is one of the first 54 or the second 46 group which was replaced by me in October, and the only one in the whole group that was saved, and it was saved out of sentimental reasons because it represented the first type—similar to the first dipsticks or one of the first dipsticks sold.



(Testimony of C. Martin Welch.)

Q. What were your findings on this search that was suggested by your counsel with respect to the laminated plug type of closure which is the subject matter of claims 2 and 3?

A. I don't follow you, Mr. Naylor. What were my findings?

Q. Yes. What did you find with relation to the delivery of the first laminated end sticks?

A. Well, I determined through manufacturing the laminations [498] in October of 1948——

Q. October, 1948?

A. Yes, and they were used on the parts replaced, the 40 odd—approximately 40 dipsticks that were still in stock at Pan American at that time, and prior to delivery of the second order for a hundred I replaced approximately 40 of the initial hundred delivered, which I say again this dipstick we produced in court is one of that returned group. From that date forward all dipsticks manufactured for all airlines, including Pan American, were sealed——

Q. And the production of the laminated ones commenced in October, 1948?

A. Latter October or first part of November. The parts were delivered, as I recall—the 40 odd replacements parts—just prior to the delivery of an additional hundred parts, which represents a shipment of approximately November 15th of that year on the second order to Pan American.

Q. Reference was made in the opening statement in your behalf to a disclaimer in the patent. Do you recall executing the disclaimer?

(Testimony of C. Martin Welch.)

A. Yes, I do, Mr. Naylor.

Q. I will show you what purports to be a carbon copy of a document and will ask if that is a copy of the disclaimer that you executed?

A. This is one with my signature on it. [499]

Q. And was it signed concurrently with the original.

A. I signed, as I recall, four or five copies, at least three copies, the day that I signed the original.

Q. Do you know what happened to the original?

A. You informed me that you—as a matter of fact, while I was in your presence you dictated a short note to your stenographer and informed her to include with that note to the Commissioner of Patents, I believe in Washington, D. C., the disclaimer, the original copy.

Mr. Naylor: We will offer the carbon copy of that, your Honor, as defendant's next exhibit.

The Court: It will be received.

The Clerk: Defendant's Exhibit I-1 in evidence.

(Whereupon, the disclaimer referred to above was received in evidence and marked Defendant's Exhibit I-1.)

Mr. Naylor: Your Honor, just as a formality—I don't think Mr. Swain has any particular objection to it, but I have a duplicate of the letter of transmittal to the Commissioner of Patents relating to this disclaimer. Is there any objection to that?

Mr. Swain: No, Mr. Naylor.

Mr. Naylor: We will offer the carbon then, your Honor, as defendant's next, just to complete that

(Testimony of C. Martin Welch.)

transaction.

The Court: Receive it. [500]

The Clerk: Defendant's Exhibit J-1 in evidence.

(Whereupon letter of transmittal was received in evidence and marked Defendant's Exhibit J-1.)

Q. (By Mr. Naylor): Mr. Welch, have you made a collection of competitive and earlier dipsticks in use by the airlines for the purpose of demonstration here in court?

A. I have, Mr. Naylor, yes.

Q. To what sources did you go in making this collection?

A. Several of them I obtained from the basement of my home that I had saved. They would represent dipsticks in use in 1948. Several others I obtained—I believe one from Western Airlines at the International Airport, one from, I believe, United Airlines, and one, I believe, from Pan American Airlines, and I believe one from—I don't know—Southwest Airlines. I think I picked one up there. I am not positive as to the various places I picked all of these up at. I looked and asked every airline at the International Airport for old dipsticks.

Q. For old dipsticks?

A. Yes, other than the plastic type they were presently using. And not very many of the people out there had old dipsticks around. They all had the current type and all purchased from me the current type of dipstick that I manufacture.

(Testimony of C. Martin Welch.)

Q. I would like to ask you, did you make any inquiry, [501] any general inquiry in relation to these dipsticks that you collected as to the price range of them?

A. Yes, I did that, very definitely.

Q. Will you tell the Court what you did in that connection, please?

A. I reviewed with a supervisor at one of the major airlines at the field a Douglas manual showing the list price of a particular part number for a hexagon metal stick that I had at my home, and the part number is stamped on the metal stick. We referred to the 1948 manual. He was reticent to give me the copy, but I doubt if it is necessary to produce it in court; we can, upon demand. The list price of that dipstick is \$26.00.

Q. \$26.00?

A. \$26.00. I think it was considered then and is today quite inferior to the one I was producing then, and the one I am producing today.

Q. I show you a dipstick and ask you if that is the one to which you just had reference?

A. This dipstick with the Douglas part number stamped on it is the one I had reference to, and this Douglas part number appears opposite the pricing in the Douglas book.

I would like—may I make a further observation about this metal stick?

Q. Yes. [502]

A. It was testified earlier in this court that you couldn't put a nail in the bottom of a dipstick

(Testimony of C. Martin Welch.)

because nobody would be allowed to use it; the metal would cause a spark. This dipstick here has been used and was in use prior to 1948 and it is metal. It too could probably, under that theory, cause a spark.

Q. Did you find other metal dipsticks?

A. Yes.

Q. Or stick?

A. The Roylin stick used currently on Congo airplanes is metal.

Mr. Naylor: We will offer these, your Honor, for the purpose of illustrating Mr. Welch's testimony.

(Whereupon, sample dipsticks were received in evidence and marked Defendant's Exhibit K-1.)

The Witness: These C-54 samples I have in the collection I believe are metal.

The Court: What is this made of?

A. I am not certain what alloy it could be. It is a light alloy.

Mr. Naylor: I don't know, your Honor. It is one of the lighter weight alloys.

The Court: It couldn't be aluminum, could it?

A. I don't know. It might be.

Mr. Grindle: It would have to be, your [503] Honor.

Q. (By Mr. Naylor): I direct your attention to another metal dipstick.

A. I believe this to be one I could have picked

(Testimony of C. Martin Welch.)

up at Pan American, but I wouldn't swear to it. I picked it up at one of the airlines.

Q. One of the airlines? A. Yes.

Q. At International?

A. At International, yes.

Q. I show you still another one.

A. This I recognize as a Roylin type dipstick that can be priced in today's catalogue at \$11.50, I believe, made by the Roylin Company in the Southern part of California. It has a fabricated hook. I think that doesn't come with it—fabricated loop, I guess, for the purpose of carrying it and hanging it, possibly. This is one of the type that would trap fuel in holes in the dipstick.

Q. May I see them?

A. Two of them, incidentally, are required for an airplane if they come attached to the filler cap, which I believe that type does.

Q. Is the calibration indicated anywhere on the stick?

A. On the inner surface the calibration figures read from 100 through 500 in twenty gallon intervals.

Q. Incidentally, of what material is the loop that has been [504] affixed to it?

A. I suspect that that is brass or copper wire.

Q. And it is screwed onto the device, is it?

A. Yes, it appears to be screwed on with brackets.

Mr. Naylor: We will offer those in succession, your Honor, as defendant's next.



(Testimony of C. Martin Welch.)

The Court: They will be received.

The Clerk: Received as Exhibits L-1 and M-1.

(Whereupon, dipsticks referred to were received in evidence and marked Defendant's Exhibits L-1 and M-1.)

Q. (By Mr. Naylor): I will show you two further examples of what purport to be dipsticks and will ask if you know anything about them?

A. One of them represents a new—reasonably new, if not—I would say new dipstick for a DC-3 aircraft, the calibrations stamped thereon in Wipe-On paint affecting the numbers in white letters. The other one is a rather beaten up dipstick for a C-46 aircraft with calibration numbers stamped therein. I would like to add further that cost estimates of this type of dipstick range from \$4.00 to \$10.00—estimates of the United Airlines. I further would like to state that Mr. Grindle advised me that prior to purchasing the plastic type dipsticks—this was well into our friendship period of the later '49, '50, '51—advised me that Pan American's price or cost for manufacturing [505] dipsticks was estimated at \$10.00 apiece prior to my dipstick. And that is vivid in my mind because, good friends that we were, I criticized him for not allowing me this information when I first offered him a \$3.00 quote and found out that I couldn't successfully manufacture it at \$3.00, then \$3.80, and then a \$5.00 quote.

Q. Coming back to the black dipstick, what was

(Testimony of C. Martin Welch.)

the price range you were given to understand was applicable to that?

A. This type of dipstick was manufactured by two different airlines that I know of, this type of dipstick, who estimated—one, United Airlines estimated it at \$10.00; and the other one, Southwest Airways, estimated it at \$4.00. I questioned their estimate and they simply stated that these are made in a particular line station in their area by a fellow who doesn't have much more than one or two flights a day to meet and, as a consequence, little overhead is figured on his time; when he is not busy, he makes several of these dipsticks.

Mr. Naylor: We will offer these as defendant's next in order, your Honor.

The Court: They will be received.

The Clerk: Defendant's Exhibits N-1 and O-1.

(Whereupon, dipsticks referred to were received in evidence and marked Defendant's Exhibits N-1 and O-1.)

Q. (By Mr. Naylor): Were you present when I was examining [506] Mr. Grindle concerning the period of your friendship with him?

A. Yes, I was.

Q. What is your best recollection as to the period you enjoyed Mr. Grindle's friendship?

A. I would say that it ran or began within a reasonably short time after delivery of the first parts, developed into a close friendship in the early part of 1949. We saw each other frequently during

(Testimony of C. Martin Welch.)

the year 1949 on golf courses; we had a minimum of half a dozen golf games together, at least three of which were in the company of mutual friends, or, shall I say, friends of mine. We had many social meetings at our home and in his apartment here on Kearny Street and later when he moved to Burlingame, at his apartment there. This friendship carried up to the last social meeting I had with him in 1953; not as he testified, 1950 or '51; I am not sure which—well into 1953.

Q. Now, as I understand it, commencing in 1948, the dipsticks of your manufacture were assembled in a basement shop of yours; is that correct?

A. In 1948 and '49 and half of '50 they were assembled in an area, I would rather call it, because I hadn't remodeled my basement; there was a whole working area in the basement. In 1950 we built a workshop as such down there that still serves its purpose. We wind up at least [507] the dipsticks, inspect them and ship them from that same spot now. However, I don't have anything to do with the manufacture or assembly of them other than that today.

Q. On the occasions of any of these visits to your home by Mr. Grindle, did you observe him in your basement workshop?

A. On most, if not all occasions in my home, he was adjacent to the workshop area; but most particularly, after the workshop was finished—we had a little rumpus room right next to it, and we spent the time down in that rumpus room.

(Testimony of C. Martin Welch.)

Q. Did you make any effort to conceal from Mr. Grindle the fact that dipsticks were being fabricated or assembled in your basement at any time?

A. No, none whatsoever.

Q. Did you make it evident in any way?

A. I would say that everyone that came to my home probably during those years—it was a topic of moderate to peak interest to us—saw us either working on dipsticks, or were shown dipsticks or handled them in some fashion.

Q. Was the making of dipsticks limited to your basement area, Mr. Welch?

A. No, we manufactured—not manufactured; we assembled parts of them on the dining room table and the kitchen table.

Q. Was this a family project? [508]

A. At that time it was, yes.

Q. Did Mrs. Welch take part in this?

A. A very active part in it at the time, yes.

Q. And upon having guests did you conceal this work or the fact that this work was going on in your house?

A. No, we, if anything—this has been our practice since we have been married—when a guest dropped in the door, we would drop what we were doing to take care of the guest, and we didn't cover—if there was anything, we pushed it aside. There was no effort made at any time to conceal our project from anyone.

Q. And you say anyone—

A. Rather, we were proud of it.

(Testimony of C. Martin Welch.)

Q. Would that include Mr. Grindle?

A. Oh, most definitely. We would have no reason whatsoever to conceal anything from him at that time.

Q. You mentioned that the friendship, according to your recollection, continued into the year 1953?

A. Yes, it did definitely continue until 1953.

Q. On what do you base that recollection?

A. I remembered of having seen him in '53 because in August of '53, came the threatening phone call—not on September 28th, as has been testified here, but it came several months after I knew at that time—several months after I had last seen him on a friendly basis. So I went in [509] search of proof of that social visit and discovered it and furnished it to you.

Q. And of what did it consist?

A. The registration records—visitors' registration records of the Transportation Club in San Francisco, Palace Hotel.

Q. You say that is a club in the Palace Hotel?

A. Yes; it has been in existence since 1905 or '04.

Q. And how long have you been a member of that club?      A. Since 1946.

Q. And what did you learn when you examined the records of the Transportation Club?

A. I discovered the date sheet—the entry sheet of the club records of May 27th, and the reason the date is clear to me now is that I have seen the records recently.



(Testimony of C. Martin Welch.)

Q. I will show you what purports to be a photostatic copy of the visitors' register and will ask you if you see your own personal signature there or a facsimile of it?

A. In the—just below the center of the page I see under a column headed, "Introduced by" my signature, "C. Martin Welch."

Q. And is there a name opposite it?

A. Over in the lefthand, under "Name of Visitor," what is intended to be the name of visitor, is "Gene Grindle," with two dash marks in the center column—in the residence column, under "San Francisco." [510]

Q. Do you recall that particular visit you had with Mr. Grindle on May 27, 1953?

A. Quite vividly.

Q. What was the tenor of the visit?

A. I took him to lunch.

Q. Was it friendly?

A. Very friendly. As a matter of fact, we never did succeed in eating lunch.

Q. Why was that?

A. Because of the drinks.

Q. You mean you overindulged?

A. I remember us chasing each other down Bayshore rather foolishly—not speeding, but passing each other on Bayshore, and I know that I shouldn't probably have been driving my automobile that day.

Q. Was the entire visit on that occasion a friendly one?



(Testimony of C. Martin Welch.)

A. Very, very friendly. Extremely friendly. He divulged much information to me about his present operations at that time, or current operations at that time, regarding his vacuum cleanser, and told me what he was doing with it and who was interested in it; took me back to Chicago with him on an imaginary trip on the vacuum cleanser.

Mr. Naylor: We will offer that page, your Honor, as illuminating the witness' testimony.

The Court: It will be received. [511]

The Clerk: Defendant's Exhibit P-1 in evidence.

(Whereupon, visitors' register referred to was received in evidence and marked Defendant's Exhibit P-1.)

Q. (By Mr. Naylor): After this May 27, 1953, visit with Mr. Grindle, I understand that the next contact you had with him in August.

A. In August by telephone.

Q. By telephone. How do you fix August as the date for that?

A. The day I hired my present secretary was in July, and the day I hired a particular salesman, the only salesman I have ever had on the road, was in August. Our records show that on the 24th that I was absent from town, on the week ending the 22nd of August; that I hired this salesman and went over in my office with him on the 24th, what I expected in the way of his duties. And it was during this conference with this newly hired salesman

(Testimony of C. Martin Welch.)

that this telephone from Grindle came in to me. I had returned it and he was out when it came back to me. And to further clarify in my mind, I had asked my secretary to listen into the conversation and then motioned her away from it. The conversation lasted fully five minutes while this particular salesman was sitting immediately to my left. Concern was shown by the salesman and my secretary over my frame of mind upon hanging up on Mr. Grindle. I didn't discuss it with them at that [512] moment, but later in the day I admitted to this newly hired salesman and to my secretary all that transpired during the telephone conversation.

Q. And then did you call Mr. Grindle back or did you have any further conversation with him?

A. No, I had no further conference, as I recall, with Mr. Grindle. I could have had, but I don't recall it. The next thing I heard was from Mr. Fox, as Mr. Grindle in closing our conversation had told me I would be hearing from Pan American, they were going to sue me for everything I had.

Q. That last statement, was that Mr. Grindle's representation?

A. Yes; I was going to lose everything because I wouldn't acknowledge his participation in this or his claim to this invention.

Q. Now, you mentioned Mr. Fox. What was the incident in which Mr. Fox participated, as you recall it?

A. Well, he called me on the—on approximately the latter part of September, a month approxi-

(Testimony of C. Martin Welch.)

mately, or maybe a month and a half, around there, after the call from Mr. Grindle, he called me and asked me to drop by his office at Pan American.

Q. And did you know him prior to that time?

A. Never had—I don't recall of ever having seen the man [513] before or since.

Q. Did he identify himself?

A. As the legal attorney for Pan American.

Q. Did you call on Mr. Fox at Pan American?

A. Yes, I called on him.

Q. And did he indicate at that time the purpose of his call to you?

A. Yes, he did, and he asked me to review certain phases of it with Mr. Boyle and Mr. Kiester, which I did.

Q. Did Mr. Fox participate in the entirety of that conversation—of the initial conference, rather?

A. The initial conference with me?

Q. Yes.

A. Yes, but not, as I recall, with Boyle and Kiester. He asked me to see them; that they had the file.

Q. Was it a delegation, as you understood it?

A. I understood it to be a group of a sort that were appointed by someone out there to investigate my manufacture of dipsticks.

Q. To the best of your recollection, what was the substance of the conference with Mr. Boyle and his colleagues?

A. They presented the drawing D-32—06114 to

(Testimony of C. Martin Welch.)

me, and said, "This proves that we are entitled to the claim of the patent." And I said, "That's not the original drawing," and quite an argument ensued about it—not argument, but a [514] discussion ensued about it being the original drawing and my stating it wasn't. And I left the conference with this promise to Boyle and Kiester: I would produce a copy of the original drawing—not knowing at the time that I could, but with the thought in mind that a possible chance remained that I could find one in Los Angeles in possible existing files down there. It occasioned me a trip to Los Angeles to find this drawing.

Q. And did you subsequently make a search of your own files?

A. Yes, I went through as much as I could find. Some of my files have been misplaced. I cannot locate it—some of my file copy records.

Q. And did you make a trip to Los Angeles?

A. I did, immediately.

Q. Did you make a trip especially for the purpose of locating this drawing?

A. For one reason only; did no other business down there, and returned the same day.

Q. What did you do after you got down there? How did you start your search? Where did you search?

A. I started—they still owned the one building. I started in the attic of that one building and ended up in the storeroom of their current plant which is far removed from it—many, many miles removed

(Testimony of C. Martin Welch.)

away from their Hollywood address [515] as compared with their aviation address next to the airport now. And I located the file, the 1948 file, containing not only that drawing, but also the drawing we have introduced here as our original drawing received on about June 10th. The other drawing I speak of is the "A" numbered drawing of the extrusion.

Q. Directing your attention again to Defendant's Exhibit F, is that the print that turned up in your search at Los Angeles?

A. This I can identify as the exact print I located.

Q. Now, when you returned did you have any—I think you testified yesterday you had copies of that struck off.

A. Three copies, one of which I have since seen in the hands—in the possession of the plaintiff; three blue photostats.

Q. And did you retain this particular Defendant's Exhibit F? Did you retain that print?

A. Yes, I supplied it to you. I put it in the file and it was later supplied to you.

Q. Did you go back to Mr. Fox or Mr. Boyle concerning this matter?

A. I returned with two of the copies. I gave one to Mr. Boyle. I felt very good about being able to produce it, and told him that apparently they were in error, here was the original one I spoke of that they denied the existence of. [516] I did the same



(Testimony of C. Martin Welch.)

with Mr. Fox. And while Mr. Boyle was reticent to close the case there, Mr. Fox did with finality say, "We are not interested—Pan American is no longer interested in pursuing this matter. If Mr. Grindle cares to follow up any cause of action, he will have to do it in the civil court on his own expense."

Q. Is that your best recollection of the import of Mr. Fox's words to you?

A. That is as near as I can recall approximately what he said.

Q. I take it you are not attempting to quote him exactly?

A. No, I am not; I couldn't remember exactly what he said. That is the gist of it.

Q. From what he said to you did you gain the impression that the matter was a closed incident?

A. I left very friendly with Mr. Fox, yes, and was left with the impression that they were no longer concerned. Never at any time during that conversation was it mentioned to me they were interested in overcharges or undercharges, as I recall. It could have been, but I don't recall it.

Q. You don't recall it?

A. But I am not having loss of memory for convenience's sake, just the sincere truth; I do not recall a long detailed conversation about overcharge on that day.

Q. Did you ever hear again from Mr. Fox? [517]

A. Never have heard from him since.

Q. Did you ever hear again from Mr. Boyle?

A. No, I have never heard or seen any of th



(Testimony of C. Martin Welch.)

two people—three people involved: Mr. Kiester, Boyle or Mr. Fox since.

Q. And your understanding was that the incident was closed upon the occasion of your second visit when you delivered the prints and had the conversation?

A. That was my complete understanding, yes.

Q. That was the end of it as far as you were concerned? A. Absolutely.

Mr. Naylor: Your Honor, I am just about through with the direct examination of Mr. Welch with the exception of one further exhibit and then I will be able to close. We would like, however, to call a witness about whom I spoke to Mr. Swain yesterday, a Mr. Klein, who has been identified by Mr. Welch, and he is connected with the School District at Millbrae, and his time, of course, is not entirely his own, although he is under subpoena and responded to that subpoena. But we would like to accommodate him if it is agreeable by putting him on, say, at 2:00 o'clock.

Mr. Swain: That is perfectly satisfactory with me, your Honor.

The Court: All right. Then let us take up again at 2:00 o'clock. It is almost 12:00 o'clock.

Mr. Naylor: Thank you, your Honor. [518]

The Court: We will adjourn until 2:00 o'clock.

(Whereupon an adjournment was taken to 2:00 o'clock p.m.) [518-A]

Wednesday, February 29, 1956—2:00 P.M.

Mr. Naylor: If it is agreeable to your Honor, we would like to interrupt the final stages of Mr. Welch's testimony and call Mr. Klein at this time.

The Court: You may.

(Witness temporarily excused.)

Mr. Naylor: Mr. Klein.

LOUIS H. KLEIN

called as a witness on behalf of the defendant; sworn.

The Clerk: Please state your name and occupation for the record.

A. Louis H. Klein, business manager, Millbrae Elementary Schools.

Q. How do you spell your last name?

A. K-l-e-i-n.

Direct Examination

By Mr. Naylor:

Q. Mr. Klein, are you testifying here pursuant to a subpoena that was served on you?

A. That's right.

Mr. Naylor: May I file that subpoena, your Honor?

The Court: All right.

Q. (By Mr. Naylor): Do you have any other business interests other than those you have stated, namely, business manager for the Millbrae Elementary Schools? [519]

A. Well, I am an inventor and a designer, and I do occasional jobs, yes.

(Testimony of Louis H. Klein.)

Q. Would you have any hesitancy in telling the Court what those other lines of endeavor are, if they are not confidential?

A. I have a line of crippled children's equipment; I have done building—I have a contractor's license which is being kept in force, although I don't use it on the present job. I design for myself and others such jobs as electric train layouts and it's quite a wide field. It is something I enjoy very much.

The Court: Is that sort of a sideline with you or do you make it any principal part of your occupation?

A. Up to the time, May of '52, when I went with the School District, it was my sole income, and since then what free time I do have I do these other jobs.

Q. (By Mr. Naylor): Do you maintain any shop facilities in connection with these part-time occupations that you are interested in?

A. Yes, I have quite a complete shop. I do wood-working and metal working, photography, and I have a good sized layout board for full size patterns, and I do molding work.

Q. I gather from the fact that you say you do layout work on patterns that you do drafting also?

A. Oh, yes. [520]

Q. In connection with your various projects?

A. Yes.

Q. Now, where do you maintain your shop, Mr. Klein?

(Testimony of Louis H. Klein.)

A. It is in the basement of my home.

Q. And that is located where?

A. 1328 Vista Grande next door to Mr. Welch.

Q. I assume that you are acquainted with Mr. Welch?      A. Oh, yes.

Q. How long have you had such acquaintanceship?

A. I met him first before he moved down there, when I was pursuing a plastic tray, and I found his name in the phone book. He referred me to another plastic company and I was much surprised when they moved next door. And there was no connection, but I believe it was in '47—I am not sure just when.

Q. And have you had an acquaintanceship with him since that time, since '47?

A. Yes, ever since.

Q. Now, in your acquaintanceship with Mr. Welch, have you had any contact at all with fuel tank dipsticks?      A. Yes, I have.

Q. And how did such contact come about? How did you learn about this?

A. Well, I had just returned from a trip to Los Angeles; I can establish the date of my return by my gasoline [521] receipts, which was May 8th of '48, and it was a few days after that—I couldn't just say how many—that Mr. Welch came over with a problem of a filler for this dipstick that he was going to make and the two of us cut the thing on my equipment, on my table saw.

Q. May I interrupt you to ask, you said that

(Testimony of Louis H. Klein.)

you could establish the date by reference to a certain trip that you had made to Los Angeles?

A. That's right.

Q. What was the purpose of the trip, please?

A. I was making crippled children's chairs at the time, and there was a metalworker strike, and I used a lot of aluminum castings in this, and I had to go down to Los Angeles to get these castings made, and as soon as they were finished, I paid the man and I came right back. And I also have brought checks and bills with me of those transactions to establish that date.

Q. Do you have those checks?

A. Yes, I do.

Q. And those things here?

A. These are the gasoline slips (producing).

Q. You have handed me a collection of what appear to be gas purchase receipts.

A. Yes, sir.

Q. Would you mind telling the Court briefly what you found [522] upon looking through that collection as to the date of your trip?

A. Oh, my first stop for gasoline going down was on May 3rd, 1948, in Fresno; and the last one I have, which is our local station, was on May 8th of 1948.

Q. And the slips in between reflect what?

A. Going and coming between the points.

The Court: I wish I could be so circumspect as to save my own.

(Testimony of Louis H. Klein.)

The Witness: Uncle Sam reimbursed me for these.

Q. (By Mr. Naylor): Now, do they indicate your presence in Southern California?

A. Oh, very definitely. Let's see. To take the return one, I filled up in Huntington Park at Slau-son and Soto Avenues in Los Angeles, which was my last stop before starting back to San Francisco, and that was on May 7th.

Q. Now, was there anything in your file, Mr. Klein, that indicates the transaction of business while you were there in relation to the business for which you had gone?

A. Yes, I have the two cancelled checks and the invoice for the castings I got from the Echo Foundry in Los Angeles. The first one is for a down payment so he would go ahead and do the work, and the other was the final payment.

Q. Thank you, sir. Now, you say it was within a few days after your return from this particular Los Angeles [523] trip that Mr. Welch came to you with the matter of finding a suitable wood filler for the dipstick? A. That's right.

Q. Will you state to the Court what Mr. Welch requested or indicated that he wanted done in that regard?

A. Well, he had these three pieces of plastic, one was a square tube, and two smaller ones, and he wanted the wood filler so that it would keep them in the opposite corners of the plastic and hold very tightly. And it was a little trick to make it. We



(Testimony of Louis H. Klein.)

made several of them before we got one that was satisfactory to him.

Q. Now, you say it was a little trick to make them. What do you mean by that, Mr. Klein?

A. Well, as you are pushing it through on a saw, you have to make two cuts for each corner, and just the least little twisting of it would throw a bow in there. It would be either too sloppy or too tight to hold these tubes in. Actually, with the equipment that I have, which is an ordinary eight inch table saw, each stick has to have four cuts the entire length of the stick.

Q. Did you do this cutting of sticks on the occasion of Mr. Welch's first visit in relation to a dipstick?

A. I would say so, yes.

Q. Is that the best of your recollection?

A. You mean his first visit in a business nature or just—— [524]

Q. His first—on the occasion of his first visit in which he indicated a desire for a suitable filler for a dipstick. Did you do the cutting on the first visit or at some subsequent time?

A. No, I think it was the first, because he came over especially for that filler.

Q. What time of day was this?

A. My guess is it was along in the afternoon or early evening.

Q. Afternoon or early evening?

A. Yes. It is purely a guess. I can't be sure.

Q. Now, did you set up your table saw to make the cuts that you thought were proper?

(Testimony of Louis H. Klein.)

A. Yes, I did.

Q. To produce this filler? A. I set it up.

Q. And what kind of wood did you work on?

A. Well, I had ordinary pine. I don't remember whether it was sugar pine or Oregon pine. One or the other. And that was what the first one was made of.

Q. And were the results satisfactory from your standpoint?

A. Yes, because my particular problem was just to get something that would fit in there snugly and hold those tubes in.

Q. Did you make any suggestion to Mr. Welch at that time [525] concerning an improved method of producing the wood filler?

A. No, not that I recall, other than if he expected me to do it in production for him, that I would not be able to, because I don't have that type of equipment. Mine is mostly experimental, making the first few pieces.

Q. Did you have any further conversation with him concerning the actual production of the wood fillers in quantity?

A. Well, yes, I did. I don't know whether it was on that same occasion or not, but we had talked about the production of it and I did give him a suggestion of where to go to get the millwork done.

Q. And what did you suggest in that regard?

A. That particular time was when we had come to the conclusion that the stick should be radiused at the bottom of the groove in order to have more

(Testimony of Louis H. Klein.)

stock left, because the straight cut went so deeply into the wood that there was no body left to it. And I suggested, because I had done designing for a firm, Fink and Schindler, that he go to them and they could probably do the work for him.

Q. Who were they?

A. They were—I don't know whether they are still in business or not, but they are cabinet workers, store fixtures and things of that nature.

Q. And to your knowledge, did Mr. Welch take your suggestion and go to Fink & Schindler? [526]

A. Yes, he did.

Q. And with what results, if you know?

A. Well, it developed that Fink & Schindler was not interested in small things of that nature, so they sent him to someone else, which was a few doors away. It was, I believe, on the same street and half a block west.

Q. Do you happen to know who that was?

A. Yes, I was there in the early stages. It was called the Shafer's Mill.

Q. You say you were there in the early stages. Will you tell us what you mean by that?

A. Well, I like to follow up as many suggestions as I make because sometimes the suggestions are just ideas and I like to see whether they actually work or not, and I was interested in seeing what kind of a setup this man would actually use to make it. And he had—I don't recall all the details now, but he was using a router, where the table saw, the

(Testimony of Louis H. Klein.)

blade comes up from underneath—this router is a vertical spindle with a cutter, and it cuts from the side (indicating). So as the material is fed in, it cuts this groove with a radius.

Q. And did you actually observe Shafer's Mill in the act of making a radius cut in the sticks?

A. He wasn't running any at that particular time, but I saw some of them that he had run and noticed that some of [527] them were waved and I told him that of course they wouldn't be acceptable because from the sample that I had made, we had to throw out that had any warps in them.

Q. I would like to show you Defendant's Exhibit N and ask if that corresponds substantially to the type of wood cutting that Shafer's Mill was set up to do.

A. Yes, it does. The only difference is in the wood. We were using soft wood the first time—pine.

Q. And that is a different wood, is it?

A. Yes, this is an ash, I believe.

Q. Now, coming back to the matter of the square cut wood filler that you say was made on your table saw, as I understand it, you felt that too much of the stock was cut away?

A. That's right.

Q. Were you able to produce any pieces that stayed together at that time?

A. I don't know whether it was at that particular time or not, but I do remember that in the development from the square cut to the radius cut that I did make one that left a little cross-section

(Testimony of Louis H. Klein.)

point; instead of the saw cutting to the full depth, it was just less than the width of the saw, so that it left a little tip on the inside. Now, that gained not quite a 64th or around there in cross-section, and that still wasn't the answer.

Q. Just for purposes of illustration, would you undertake [528] to make just a little rough sketch of that?

A. Yes. Here's the square that the wood is originally, and coming straight in like this, and it left a little section like that (indicating). The straight end cut, the first one we made actually was clean down in there. You can see that by doing this on both sides; the objection was to get as much stock through here as possible and we gained about this much. It was very little, not enough to do any good. So that led to the development or the idea of changing that, then, through a radius, in which you would get the actual benefit of the stock through here, and it wouldn't be so weak.

The Court: Will you explain to me just exactly—I don't quite get what you mean by "stock."

The Witness: When I speak of stock, it is the wood itself.

The Court: I see.

The Witness: I have taken this and it is a cross-section of the long piece, and it is the end view of it.

The Court: I see.

Q. (By Mr. Naylor): That had to do with a

(Testimony of Louis H. Klein.)

strengthening matter, didn't it, or stiffening matter?

A. Oh, yes, the more wood you could keep in there as a filler, the stronger it would be.

Q. Will you mark that with your name so that we can identify [529] it on this record, please?

A. If I had known that, I would have made a better one.

Mr. Naylor: Thank you. We will offer that just to illuminate the witness' testimony, your Honor.

The Court: It may be received.

The Clerk: Defendant's Exhibit Q-1 in evidence.

(Whereupon, drawing made by witness Klein was received in evidence and marked Defendant's Exhibit Q-1.)

Q. (By Mr. Naylor): Could you tell us approximately when it was that you saw the Shafer Mill set up and the samples of their first cutting of wood on a radius cut?

A. I would be afraid to hazard a guess, but it was certainly prior to the time that he would have billed Mr. Welch. You could pick up the date from that, because I was there before that; he was still in the process of doing the job.

Q. When you first——

A. When I saw it at Shafer's plant.

Q. When you actually saw it at Shafer's?

A. Yes.

Q. But you have no independent means of fixing the date when you saw that?



(Testimony of Louis H. Klein.)

A. No, I am sorry; I don't.

Q. Now, I'd like to show you what purports to be a rough dipstick assembly and will ask if, as you see it, it corresponds approximately to the device that was made up, utilizing [530] the first cut made on your table saw.

A. With the square cuts?

Q. With the square cuts.

A. No, this has a radius.

Q. That has a radius?

A. Yes, this has a radius.

Q. You recognize that as a radius cut, do you?

A. (Nodding in the affirmative.)

Q. I now show you Defendant's Exhibit H and will ask if that particular sample corresponds, as far as the wood is concerned, to the first cut made on your table saw.

A. This is not on the radius. This is a square cut.

Q. Does that correspond approximately to the cut that you produced?

A. The first one, yes, sir.

Q. At Mr. Welch's request. Now, I assume that after the cut had been made you tried the assembly of the device?

A. Well, as I remember, Mr. Welch was standing on the opposite side of the saw and whenever I made one, he would take it and do the actual trying, because he was the sole judge of whether it was satisfactory or not. I was just cutting it.

Q. And was this just a matter of accommodation or were you a salaried employee at that time?

(Testimony of Louis H. Klein.)

A. Well, Mr. Welch was not in a position to pay anything [531] at the time, so therefore I made no charge. And had he been in a better condition, I would have made a charge and you would have had some definite dates because they would be in my books.

Q. Now, I assume—let me ask you this: As a result of the cuts that you were making on this initial occasion on your table saw, was one produced that satisfied Mr. Welch at the moment?

A. Yes, he went away satisfied.

Q. He went away satisfied. And the wood in that particular one as to which he expressed satisfaction corresponded to this particular exhibit?

A. No, this is a hardwood.

Q. I don't mean as to the composition of the wood.

A. Oh, you mean the cross-section?

Q. As to the cross-sectional aspect?

A. Yes, that's right.

Q. And I was showing you Defendant's Exhibit H for identification.

Mr. Naylor: We will offer this at this time as an exhibit, as Exhibit H, it having been previously merely identified.

The Court: Let it be received.

The Clerk: Defendant's Exhibit H in evidence.

(Whereupon, Defendant's Exhibit H for identification [532] only was received in evidence.)

Q. (By Mr. Naylor): Now, in connection with

(Testimony of Louis H. Klein.)

the dipstick, Mr. Klein, did you make any drawings on behalf of Mr. Welch?

A. Yes, I made a drawing of it.

Q. Did you make a drawing of the parts or the assembly of the parts?

A. As I recall, I made an assembly, a cross-section, and showing the wooden filler by itself.

Q. Could you tell us approximately when this drawing was made, to the best of your recollection?

A. I am sorry, I can't. It would have to be before the radius cut was made.

Q. Why do you say that, sir?

A. Well, because I drew it as a square cut.

Q. You drew the sticks as you had cut them?

A. On this drawing, yes.

Q. I see. And would you date it, then, before you saw the radius cut sticks at Shafer's Mill?

A. Yes, I would.

Q. Mr. Klein, I will hand you what purports to be an original pencil drawing and will ask if you can identify that?

A. Yes, that is the drawing I made.

Q. Now, does that drawing show the square cut that you [533] have been describing to the Court?

A. Yes, it shows the square cut.

Q. And does it show the small tubes?

A. Yes.

Q. Does it show a larger outer tube?

A. Yes.

Q. And does it show those four pieces in assembled condition?

(Testimony of Louis H. Klein.)

A. Yes, it's right here in my broken section.

Q. Is that at the center of the drawing?

A. That's right.

Q. And are the parts, or rather, were the parts labeled by you?

A. Yes, I did the complete drawing with the exception of this signature, print number and the date down here.

Q. Everything else on the drawing was prepared by you?

A. That's all in my style, yes, sir.

Q. Now, is there anything on the drawing, disregarding the signature, the date and the print number to which you have referred, that dates the drawing as far as you are concerned?

A. Yes, I would say that it's the matter of the square cut there.

Q. And why do you say that?

A. Well, it's because I am a perfectionist and had this [534] wood been radiused at that time, because I had something to do with it by sending Mr. Welch to have a radius cut, I certainly would have made that radiused and not square.

Q. But it is definitely square in that drawing?

A. Yes, sir, it is square.

Q. Now——

A. And in two places, not only in the cross-section but down here in isometric view of the end it shows it in a square.

Q. Yes. Now, I notice that certain numerals and figures have been placed on certain parts of that

(Testimony of Louis H. Klein.)

particular drawing. What do they purport to represent?

A. Well, it's just a scale, meaning no particular one, to show where the scales would be located.

Q. It is merely symbolic?

A. I would say that, yes, sir.

Q. Did those figures mean anything to you as far as a usable scale? A. No.

Q. Was it merely to indicate the location of the scale?

A. It was just—yes, the location and to show that that is a scale.

Q. Now, with reference to the date on the drawing, was that drawing dated in your presence or do you have any recollection? [535]

A. I don't think it was; I don't know.

Q. You don't know?

A. I really don't know.

Q. You have no independent recollection of the signature of the drawing? A. No.

Q. I see. Now——

Mr. Naylor: By the way, I would like to have that marked merely for identification at this time, your Honor.

The Court: Let it be so marked.

Mr. Naylor: Next in order.

The Clerk: Defendant's Exhibit R-1 for identification.

(Whereupon, drawing referred to above was marked Defendant's Exhibit R-1 for identification.)

(Testimony of Louis H. Klein.)

Q. (By Mr. Naylor): Now, beyond the cutting of the wood and the making of the drawing, Defendant's Exhibit R-1 for identification, did you have any further connection or have you had any further connection with the dipsticks as Mr. Welch's business developed?

A. Oh, yes, I helped assemble a lot of them, and I made gadgets to cut down the labor cost and I even talked myself out of a job by suggesting that he get boys to make the assembly because the rate was not as high as mine.

Q. And what kind of gadgets did you mean to indicate?

A. Well, in putting the small tubes into the square tube, [536] the first one was to make a spring device that would hold it over into the corners until the plastic binder or adhesive took hold and held it in there.

Q. Is that like a jig?

A. Yes, you could call it kind of a hand jig. And then later on in the development I built a press that would put the plugs in, press them into place and at the same time give the accurate spacing at the bottom and the top that was required, according to Mr. Welch's specifications.

Q. Yes. Now, anything else that you can recall?

A. Well, I built a shop for him to accommodate the manufacture of these.

Q. And approximately when was that, sir?

A. That was just before I went with the School District. It was in the early part of '52.



(Testimony of Louis H. Klein.)

Q. Now, was there anything else appertaining directly to the dipstick that you can recall that you had a hand in doing?

A. Well, Marty was always coming over with various little problems and we worked on them together. There were so many of them I don't think I can recall them all.

Mr. Naylor: Excuse me, your Honor.

No further questions on direct.

### Cross-Examination

By Mr. Swain:

Q. Mr. Klein, is there anything in [537] connection with those checks, gasoline receipts that you have produced that definitely identifies that as the trip immediately preceding Mr. Welch's visit to you with the dipstick?

A. Well, except that from my recollection that it was after that trip from Los Angeles. It was a few days after that.

Q. How frequently do you go to Los Angeles?

A. The previous trip, I think, was a year—at that time I probably went down, oh, it wasn't every year.

Q. Just what did Mr. Welch bring to you at the time of this first visit?

A. As I recall, it was the three pieces of plastic tubing

Q. And those three pieces would be a square outer piece and two tubular pieces?

(Testimony of Louis H. Klein.)

A. That's right.

Q. Was there any wooden filler to go in there?

A. I don't recall whether there was or not.

Q. What did Mr. Welch tell you about the necessity for a filler?

A. Well, he explained to me what the thing would do when finished, the general idea, and that that wood filler would keep the tubes in place and also strengthen the tube to keep it from warping.

Q. And was this wooden filler to have any other function?           A. To hold the scale.

Q. Did he explain the nature of the scale to you? [538]

A. No, I don't think at that time he had that completely formulated.

Q. Did he explain the paper scales which were to be secured to the wooden filler?

A. No, I believe that was a later development.

Q. Is it your recollection, then, that the scale was to be applied directly to the wood by means of ink or printing or something of that sort?

A. It could have been, yes.

Q. But you are not sure?

A. No. My problem was only to make the wood that would hold the tube in place.

Q. And that was to be a relatively tight fit?

A. Yes.

Q. And as I understand your testimony, you simply took a square piece of wood and cut out square grooves in opposite corners?

A. That's right.

(Testimony of Louis H. Klein.)

Q. And that's all you did? A. M-hm.

Q. Was nothing else done to this wood?

A. No, I believe he actually cut it to the proper length.

Q. Was there any attempt made to develop a slight curvature on the other sides of the wood so they would correspond to the inner curvature of the square tube? [539]

A. No, because my equipment is very limited and it couldn't possibly make that kind of a cut.

Q. You appreciate the cut to which I am referring? I am referring you now to your exhibit, or rather, to Defendant's Exhibit Q-1, and I am referring to these opposite corners. Were they curved in any manner? A. These?

Q. Yes.

A. I don't think they were. I can't recall, unless—if he took some sandpaper to smooth out the main surfaces, he would naturally smooth those over a little bit, too.

Q. But I thought that he was testing them for tightness as they came off the other side of the saw.

A. Well, he could be taking a piece of sandpaper and working on it, too.

Q. He could be, but you are not sure that he was, are you? A. No.

Q. Now, isn't it true that the inner surface of this square tube has a slight curve on opposite corners?

A. The inner surface of the plastic tube?

(Testimony of Louis H. Klein.)

Q. Yes. A. Yes, it does have.

Q. The piece which ultimately satisfied Mr. Welch, I understand, was a rather tight fit?

A. M-hm. [540]

Q. Was any test made in your garage as to tightness, or how did you determine it was a tight fit or a sufficiently tight fit?

A. Well, he laid the two tubes, the smaller ones, into the grooves and pushed them into the main tube, and if it stayed there, that was it.

Q. Was there any attempt made to shake them out, or did you just push them in?

A. Well, yes, if it came out by shaking, it wouldn't be any good. It had to fit in there tight.

Q. Well, would you say that they fitted about as tightly as this Exhibit H, which I am handing you?

A. No, there's a difference in this, because, as you pointed out, there is a radius to the tube itself and this wood has been radiused out on the outside also to take care of it. However, if you are interested, and I believe we were at that time, just so that these things didn't come out, the tube would be supported at these two points, and out here, and it wouldn't make too much difference about out here on the face.

Q. In other words, in this Exhibit H, by virtue of the opposite corners being slightly rounded to increase the friction engagement between the side edges of the filler and the inner area of this outside square tube, is that right? [541]

A. Yes, you have more contact surface there.

(Testimony of Louis H. Klein.)

Q. And if you did not have those radiused corners, but simply shoved it in, then your principal points of contact would be on the corners of the wood filler and the tube? A. Yes.

Q. And a dipstick constructed in that manner, or rather, in a dipstick constructed in that manner, a wooden filler would more easily come out, wouldn't it, because there wouldn't be so much friction engagement there to hold it in place?

A. No, it wouldn't come out because it would be wedged in there.

Q. Now, who suggested to you the form of the filler which was to be put into this dipstick?

A. Mr. Welch did.

Q. And who suggested the utilization of end pieces or plugs as shown in Exhibit R-1?

A. That I can't say exactly. It was either Mr. Welch or someone that he had previously been talking to, because that wasn't my problem.

Q. Did Mr. Welch bring another drawing over to you at the time he first made his first visit?

A. I couldn't swear to it. I don't believe he did, though.

Q. Do you recall whether he brought any sketches or made any sketches in your presence? [542]

A. No.

Q. Can you tell from looking at this drawing just what these plugs were supposed to represent?

A. Yes, they would make it—they would fill it up so that the fluid wouldn't get inside between the wood and the inside plastic.

(Testimony of Louis H. Klein.)

Q. Is there any indication on this drawing as to how these plugs were to be made?

A. Not by my sketch, no—just this.

Q. Any indication whether they were made up of several laminations or a single piece of material?

A. No, that was a later development of his. I do recall that we made a few of them where we put the “goop” as we call it, all in at once, and then tried putting it in just a little bit at a time.

Q. Well, is this a plug?

A. That is considered still a plug.

Q. Then was this plug which is shown here supposed to indicate a mass of cementitious material which is shoved in there and allowed to dry, or is it supposed to represent a plastic plug or plate, we might say, which was shoved in and cemented in place.

A. Well, at the time I made this drawing, I would say that there were no actual details available of what he was going to do because I haven't gone into detail of what that plug [543] is.

Q. These lines, these parallel lines in the plug, and—do they indicate anything in particular to you?

A. No, they are just shading.

Q. Is the manner of showing a cross-sectional view at the center of the drawing, entitled “General Details,” approximately full sized, a customary way of showing a cross-section?

A. That seems to be my own brand of doing things. All designers have their peculiarities.



(Testimony of Louis H. Klein.)

Q. And that's one of yours? A. Yes.

Q. Who suggested the valve control model which is shown on this exhibit? I had better give it to you so you will have it.

A. Oh, Mr. Welch came up with that.

Q. What is it supposed to represent?

A. Well, the possibility of having some sort of a valve on there that would do it better than keeping the finger on it, because very often something of this type when it is lifted up, a person is apt to take his finger off, and of course the fluid will go right out.

Q. So you provide, then, either for a valve in the top or bottom?

A. This says, "Valve in top or bottom." See, this was just [544] an idea or a possibility.

Q. Do you know what the legend, "Print No. 5" in the lower lefthand corner of that drawing means?

A. It's some designation that Mr. Welch or someone else put on there. It's not my writing and not in my printing.

Q. And how about the notation, "Invented by"; who put that on there?

A. The "Invented by" is my lettering.

Q. And the date, 12 May, 1948?

A. That's someone else's.

Q. You don't know whose? A. No, sir.

Q. It wasn't put on in your presence?

A. No, sir.

Q. And you didn't initial this drawing anywhere or indicate any date that you made it, did you?

A. No, sir, I didn't.

(Testimony of Louis H. Klein.)

Q. Did Mr. Welch suggest the legend, "Liquid column type measuring gauge" at the top of the page?

A. Kind of sounds like my wording. Outside of that I couldn't say.

Q. You don't know whether Mr. Welch suggested that?

A. No, I don't.

Q. How long after Mr. Welch first approached you did it take you to produce that drawing, the exhibit that you have in [545] your hand?

A. You mean if I were doing it at one sitting, how long would it take me to make this drawing?

Q. No; excuse me, Mr. Klein. I mean how long did it take you or what period of time elapsed from Mr. Welch's first describing the dipstick to you and your production of the drawing?

A. I am sorry; I couldn't give you an answer on that. I wouldn't know.

Q. Well, do you think it took you two or three days to produce that drawing or did you do it the very evening he came over?

A. That sounds more logical, because this isn't a time consuming drawing.

Q. Well, what sounds more logical? I asked a double barreled question; I am sorry.

A. Well, that I did it in a short time. He could have come over and asked for it and I probably didn't spend more than an hour and a half or two on the thing.

Q. In the completed dipstick—Excuse me; strike that. Can you describe to me the condition of the

(Testimony of Louis H. Klein.)

dipstick when Mr. Welch left your premises after you had succeeded in making a satisfactory filler?

A. You mean the first one?

Q. Yes. [546]

A. With the square cuts?

Q. Yes.

A. No, except that he went out of my shop with the thing assembled.

Q. Did it have any end plugs in it?

A. Oh, no.

Q. Did the wood extend from one end of the outer tube to the other? Was it flush or was it slightly indented?

A. I couldn't say because, as I recall, Marty cut it to his own length. The reason I did the actual cutting on my table saw is I don't trust very many people to work it, and whenever Marty has come over to work on something in my shop, or any other neighbor, if I think he has the ability to work a certain equipment, why, he can use it. But the saw is a little different story. I generally handle that myself.

Q. Well, then, knowing that, do I understand that Mr. Welch, however, did determine the length of this piece of material?

A. Yes, I am sure that he probably went over to the miter box, or I will say that he did go over to the miter box and make the cut which would determine the length of it.

Q. And you don't recall whether the filler was the same length as the tube or not, do you, sir?

(Testimony of Louis H. Klein.)

A. No, I wouldn't recall that. [547]

Mr. Swain: That's all, your Honor.

Mr. Naylor: No further questions, Mr. Klein.

(Witness excused.)

Mr. Naylor: Mr. Welch, please.

### C. MARTIN WELCH

resumed the stand in his own behalf.

#### Direct Examination

(Continued)

By Mr. Naylor:

Q. Mr. Welch, Mr. Swain called my attention to the fact that one of the dipsticks that I had handed him for inspection had not been identified nor introduced. I will now hand you that particular dipstick and ask if that is a part of the collection that you made in seeking the competitive structures?

A. No, this is a dipstick I remember as having been around my basement for quite a long period of time.

Q. Do you know the origin of the stick?

A. Yes, I do. I picked it up at Trans World Airlines in Kansas City, Kansas.

Q. And approximately when?

A. I have no way of establishing the date, Mr. Naylor. I made trips to Kansas City in '49, '50, '51—three successive years, after initiating or trying to initiate business. Those three years I am positive of. It was on one of those trips, definitely. I don't

(Testimony of C. Martin Welch.)

believe I went in '52 to Kansas City or in '53, but for three years in a row [548] I made successive trips around the country.

Q. And it was on one of those trips that you picked this particular stick up? A. Yes.

Q. Do you know the mode of operation of that particular stick?

A. Well, this one has a Schrader type valve on the end of it. It is a valve similar to the one you have in your automobile tube, inner tube. And the principal of this one is to insert it, and it is, incidentally, calibrated for a Constellation airplane. You insert it into the bottom of the tank and push down on the valve, and thus cause the fluid to rise in the tube, take pressure off and then the valve, which is spring-loaded, closes (indicating).

Q. You called attention to the fact that the valve was at the bottom of the stick.

A. That's correct.

Q. How do you establish that? Is there anything to indicate that on the stick?

A. The configurations would indicate it, Mr. Naylor. The bottom scale being 600, the top marking being 1,550, or the top marking being "Full" and below that "1,550 gallons," and the increment change rate is in 50 gallon increments, which would definitely indicate that as you go to the tank and it was up here, if you had trapped that much fuel in it, [549] you would have 1,550 gallons that I speak of. It is definitely on the bottom of the stick. It's a dipstick that Trans World Airlines—now,

(Testimony of C. Martin Welch.)

again, I say I have no way of establishing when I picked that up. I did pick it up in Kansas City. It is a stick that they had in operation at the time and for some time prior to that, and until rather recently—I say “recently,” ’54 or ’55, 1954, or ’5— they used this type stick. Even though this stick, by their estimate, the cost factor on the stick on making these was considerably more than the cost of purchasing my stick, they chose to use this type for one reason alone, and that was because someone in their safety department found that under the most ideal conditions relative to humidity and everything else, and with a particular type of cloth, he could rub the dipstick a number of times and in rubbing it, create a static charge enough to ignite a vapor bomb. So he thus recommended through their safety engineers or through their safety department that they not purchase my stick unless we put something in it to release the static charge, which, when I say “something in it,” that could be a strip of foil the length of the tube.

Q. But you picked this up at TWA?

A. Yes. I might also call your attention to the fact that—I don’t know what type metal this is but it is metal in the bottom of this stick. [550]

Q. You were speaking of the valve mechanism at the bottom of the stick? A. Yes.

The Court: May I see it?

Mr. Naylor: Excuse me, your Honor.

A. (Continuing): It is a machined screw. I don’t know of what metal alloy or composition.



(Testimony of C. Martin Welch.)

doubt very much if it is aluminum. Seems to be chromed, whatever material it is.

Mr. Naylor: We will offer that as a final dipstick to illustrate the witness' testimony, your Honor.

The Court: It may be received.

The Clerk: Defendant's Exhibit S-1 in evidence.

(Whereupon, dipstick with valve assembly referred to was received in evidence and marked Defendant's Exhibit S-1.)

Q. (By Mr. Naylor): Now, you have previously mentioned that you called on your neighbor, Mr. Klein, for some assistance in relation to the wood section of the dipstick at the time of the initial contact that you had with it. A. M-hm.

Q. As I understand it, you received from Mr. Kerr an assembly, is that correct?

A. That is correct; an assembly consisting of four parts—three pieces of plastic and one piece of wood.

Q. Now, were you satisfied with that particular assembly [551] in all details?

A. No; if I had been, I wouldn't have found it necessary to go and ask Mr. Klein to mill out another piece of wood for me.

Q. What was the specific reason for your dissatisfaction with it in any respect?

A. As I recall, the main reasons that I was concerned with it were, on the wooden filler or spacer set up by Mr. Kerr, it was very loose in the stick.

(Testimony of C. Martin Welch.)

It wasn't a tight-fitting piece, and the surfaces whereon I knew calibrations in some manner would have to go, even then, naturally, I would know that calibrations would have to go on there in some fashion, whether you stamped them on, painted them on or put paper on it or what. I don't recall how they were supposed to go onto it. And I took—let me put it this way: To the best of my recollection, I assumed—I can't see why I would have removed the spacer. I assume I took it over to Mr. Klein, but by the same token it is perfectly logical for me, if I wasn't satisfied with it, to have taken it out and walked over to him with the three pieces and told him exactly what I want. I don't think there is much of a controversy that exists there as to justification for doing it.

Q. Do you have any positive recollection one way or the other as to whether you took the total Kerr assembly? [552]

A. I seem to recall I did take it all over there. Mr. Klein has testified differently. I have argued with him several times before. I could never convince him of anything, I am sure.

Q. What specifically did you ask Mr. Klein to assist you with?

A. To make a wood assembly that would meet the requirements at the time I knew were necessary.

Q. And how long a period of time did it require for Mr. Klein to cut a piece of wood that was satisfactory to you for that purpose?

A. I have no way of knowing, Mr. Naylor. I

(Testimony of C. Martin Welch.)

know that he cut possibly a half dozen parts, so—as he got onto the job—when I came over, he dropped what he was doing and did it for me. But in the interval between when he started and completed it, I have no way of knowing. It could have been anywhere from an hour or half an hour to two hours.

Q. What I am getting at, did it take days or weeks or what?      A. No, that evening.

Q. Was it all done in one evening?

A. Yes, the wood part he made for me just (snapping fingers)—within a couple of hours or maybe within 15 or 20 minutes, but how long I can't tell you. I walked away [553] with the completed part, satisfied with it.

Q. You walked away with the completed part?

A. Satisfied that it was something I now could show to Pan American.

Q. Did he hit it on the first try?

A. No.

Q. Or were there several?

A. No, no, he reset his saw blade several times.

Q. And what did you do while this was going on?

A. Well, I stood across from him, as he said, and tried the wood until I was satisfied with the fit and with the dimensions of it.

Q. And you finally walked out with one that was satisfactory?      A. That's right.

Q. And was that the assembly that you eventually delivered to Pan American as a sample?

(Testimony of C. Martin Welch.)

A. That was exactly the sample and the only sample that was furnished Pan American during the months of May and June, prior to getting more tubing in July. It is possible I could have taken another sample out to them in July. Not probable—it is not likely, because I think I walked over with the first production parts in August. But it is possible.

Q. Now, Mr. Klein cut the cross-sectional aspect of the wood filler. Did you do anything to any part of the stick while you were at Mr. Klein's? [554]

A. I don't recall ever cutting it to length, but I may have.

Q. But the result was that you walked out with something that was satisfactory to you?

A. I definitely left his shop after it was completed and cut the way I wanted it.

Q. Now, Mr. Welch, I would like to show you defendant's Exhibit R-1 for identification, which is the drawing to which Mr. Klein referred.

Mr. Naylor: Does your Honor wish to take the afternoon recess?

The Court: Yes, as soon as he identifies that.

The Witness: I can identify the drawing.

Q. (By Mr. Naylor): Did you ask Mr. Klein to make this drawing for you?

A. Yes, I asked him to make the drawing for me.

Q. Did you have any other drafting facilities at your call at that time?

(Testimony of C. Martin Welch.)

A. Only those that may have been offered me, assistance that may have been offered me by Mr. Grindle, the facilities at Pan American. I don't recall.

Q. You didn't have any independent draftsman?

A. Oh, no.

Q. That you recall?

A. Answering your question directly, no. [555]

Q. And was this request to Mr. Klein a matter of accommodation or was it a job to be done for hire?

A. I couldn't afford at the time to have hired him. It was an accommodation job on his part.

Q. An accommodation job, you say?

A. I had no money to hire him with. As a matter of fact, I was working for him not too far previous to this time, drilling out castings on his machine lathe.

Q. Now, were you present when Mr. Klein made this particular drawing?

A. I would say I was there with parts of it or possibly all of it, when all of it was made. I have a faint recollection of being on hand and explaining to him various things about the drawing, yes.

Q. How did you start the ball rolling on the making of this drawing by Mr. Klein? Did you supply him anything or did you just tell him, or both?

A. That's awfully difficult to remember, Mr. Naylor. I could express logical reasoning, but I couldn't safely, soundly say I remember giving him a sample. It is logical that I would have described



(Testimony of C. Martin Welch.)

it to him. Maybe even made a sketch or two, although—I don't know. I can't remember.

Q. Now, do you have any means of fixing, according to your own recollection, the approximate time when you first saw Defendant's Exhibit R-1 for identification in the [556] completed form in which it now appears?

A. I can only approximate it as being around June of '48, and I arrive at it solely because I know Mr. Klein real well and when he says he is a perfectionist, he is—quite. He is a perfectionist and he couldn't have made this drawing after the radiused wood—that shape—was milled. He couldn't have made it before the 12th of May, so he made it in that interval or period.

Q. Now, I call your attention to the fact——

A. I can't establish when.

Q. Beg pardon?

A. I cannot establish when. Some time in that period of time.

Q. All right. Now——

A. Approximately.

Q. I call your attention to the fact that this drawing purports to contain a signature and a date and——

A. It is my handwriting, the signature and date. The address is my address, the time was—at that time it was 55 New Montgomery. It still is.

Q. Now——

A. "Print No. 5" in the left-hand corner is also my writing.

Q. I will come to that in a minute. Let's take



(Testimony of C. Martin Welch.)

the matter of the signature and date first. According to your [557] recollection, did you actually sign that drawing on May 12, 1948?

A. Oh, no, definitely not.

Q. You did not? A. No. [557-A]

Q. How can you say that? I mean, on what do you base that?

A. Well, I know that no drawing was made on the 12th. A sample was made on the 12th, but no drawing was made on the 12th. I can go a little bit further and say that I doubt if I was aware on the 12th of May, I doubt very much if I was aware that plugs were required, as such. I wasn't aware of that until well into the latter part of May, possibly even the very first few days—one or two or three—into June.

Going further, the valve suggestion is something I discussed with Mr. Grindle on about the first order for dipsticks, and that wouldn't have been done on the 12th of May. The 12th of May represents the day that we made the first sample; it is the date I put on there when I signed the drawing, whatever date the signature was I don't remember. I do not recall.

Q. You can't then fix the actual date of signature?

A. I cannot do that. The date, May 12 date, is the day that the embodiment contained in the drawing was conceived, specifically, the two round tubes, the square tube and the wood. As to the plugs, that did not relate, I believe, to plugs, because I remem-

(Testimony of C. Martin Welch.)

ber very distinctly I wasn't aware the plugs were required initially—that is, on the 12th of May, let us say.

Q. Yes. Now is it your testimony, then, that the date May 12, 1948, is not intended to indicate the actual date of [558] your signature to the drawing but is to indicate some other event?

A. It most definitely indicates the——

Q. Rather than the signature?

A. ——conception of the main parts displayed on the drawing. May the 12th further establishes that I made the assembly, the initial assembly, around or on the 12th of May.

Q. Now you mentioned the words "Print five." Will you explain to the Court, if you can, the significance of that phrase?

A. I have been asked that before, and outside of an imaginary attempt at—I don't know. I can't tell you why I put it on. I was going to say an imaginary attempt at adding prestige, to the fact that maybe we made a whole bunch of drawings. But there was only one made at the time. There wasn't five made.

The Court: Let's take the recess now.

Mr. Naylor: Thank you, your Honor.

(Recess.)

Q. (By Mr. Naylor): I think we had just about concluded the discussion of that particular drawing.

(Testimony of C. Martin Welch.)

Mr. Naylor: We will offer that original drawing, your Honor, as defendant's next in order.

The Court: It may be received.

The Clerk: Defendant's Exhibit R-1 in [559] evidence.

(Whereupon, drawing referred to above was received in evidence and marked Defendant's Exhibit R-1.)

Q. (By Mr. Naylor): Mr. Welch, will you be good enough to look in Mr. Vale's file, Defendant's Exhibit H-1, and see if there is in that file a print of any kind of the Klein drawing you have just been discussing?

A. Yes, a duplicate run from that vellum is in his file.

Q. And to what is it attached?

A. Attached to somewhat of a descriptive letter that I had and can recall of having used probably the first part of 1949.

Q. Now——

A. Giving advantages of the dipstick, describing advantages of it.

Q. Do you recognize that as material handed by you to Mr. Vale during the time that you were discussing the matter of the patent application?

A. It had to be, Mr. Naylor, yes.

Q. Now in the Vale file do you find any other print of a drawing of any kind?

A. There's another drawing at the end of that one, and immediately I recognize it as a drawing

(Testimony of C. Martin Welch.)

covering the calibrations for the Boeing dipstick.

Q. The Boeing Aircraft?

A. It is dated—it is drawn by G. Boyle and dated [560] February the 4th, 1948, but that date has to be in error, because my name is on this drawing.

Q. Were you manufacturing dipsticks in February, 1948?

A. No, had nothing to do with them. Didn't even know anything about a plastic dipstick at that date. It must have been intended to be 1949.

Q. Does the subject matter of the drawing itself age-date it to you?

A. I would say it does definitely represent itself as possibly the first or among the, let's say, the calibrations on it are of a type that we used on the first order for Pan-American for the Boeing dipstick, which reference to my files would show that we made and delivered in February of 1948 or in March of——

Q. '49, you mean?                      A. '49, excuse me.

Mr. Swain: Mr. Naylor, we will stipulate that that drawing is a year off. We noticed the same error.

Mr. Naylor: Thank you, Mr. Swain. That concluded the interrogation on that.

Q. Will you restore these to the approximate place in the Vale file at which you found it, please?

A. I find another.

Q. You have shown me another print. Is that a print——

(Testimony of C. Martin Welch.)

A. Another blueprint copy of the—this is the blueprint [561] and the other one seems more like a—this is a blue line print, but it is run off the same vellum, identical, of the drawing made by Mr. Klein.

Q. Now among the material that you find in the file, is there a calibration chart sample?

A. There's one that I certainly must have given—I had to give Mr. Vale; that being a bottom sheet, it is not labeled and I can't identify for which particular aircraft it might have been. It undoubtedly was given to him at his request for a piece of paper—the other lacks a calibration—that had the calibration on it.

Q. I see.

A. I haven't gone through this (examining file).

Q. I see you have an envelope. Will you ascertain whether the envelope has any contents?

A. They represent the first plugs we made for dipsticks, yes.

Q. Were those plugs for laminated type of closure?

A. They were for the laminated type of closure, yes.

Q. I see.

A. This is not my writing. It appears to be his. It is similar to his style.

Q. You have no knowledge of it? A. No.

Q. Thank you. Now you were present, were you not, when Mr. [562] Grindle was testifying concern-

(Testimony of C. Martin Welch.)

ing the conference in the offices of Flehr and Swain?

A. I was, sir.

Q. And you recall the approximate date of this, do you?

A. Approximately Wednesday, the 8th of February.

Q. Of what year?

A. Oh, when you ask, you meant when was I present in this court?

Q. Yes.

A. Approximately the 8th of May, 19—the present, current year.

Q. Here in court, you are talking about?

A. Yes. Is that what you had reference to?

Q. No. I had reference to the dating of the Flehr and Swain office correspondence.

A. Oh, I recall that as being, as having taken place in 1954. I can't be sure about that—could have been early '55 or late '53, but it seems to me like 1954 would be the year.

Q. Now you were accompanied by whom?

A. Mr. Bruce Fratis, who had been at the time my counsel on legal matters.

Q. And as I understand it, Mr. Flehr?

A. Mr. Flehr was present, Mr. Hohbach and Mr. Grindle, Mr. Fratis and myself, yes. [563]

Q. That was the total attendance?

A. That's correct.

Q. And the purpose of that conference was to explore the possibilities of amicable compromise?



(Testimony of C. Martin Welch.)

A. That's right, it was brought about by the suggestion—so told me by Mr. Fratis—of Mr. Hohbach.

Q. Now, Mr. Grindle attributed to you words and suggestions of a threatening nature. What about that? Did you threaten Mr. Grindle with a suit.

A. He was quite dramatic about it. I didn't.

Q. Did you threaten him?

A. I didn't threaten him with any suit at all.

Q. Did you use words, "I will sue you," or words of like import?

A. No, I definitely did not.

Q. Did you use words having reference to injunctive relief or any such phrase?

A. I am sure that Mr. Grindle, Mr. Hohbach and Mr. Flehr know exactly what I said in conjunction with that. I can repeat it to this day and can again.

Q. I wish you would repeat it. What is your recollection of the way the question was put to you by—was it Mr. Flehr who put the question?

A. Mr. Flehr, yes, proffered the question to me on several occasions, as I recall, but whether or not that is [564] important or not, I don't know. On several occasions during the last part of our trip there, he asked me, or maybe he asked me twice, immediately one after the other, if I would agree to Mr. Grindle manufacturing dipsticks. I do not remember his wording as such. It was similar to that. And I told him there were two drawings, again the principal drawings of the Pan-American Airways

(Testimony of C. Martin Welch.)

correspondence with Boyle, Kiester and Fox, I identify them as the A drawing and the B drawing produced in court here.

Q. Do you have reference by that to Plaintiff's Exhibit 6 and Plaintiff's Exhibit 8?

A. If you have to read the exhibit numbers correctly. Yes, those are the two drawings I have reference to.

Q. Were those drawings referred to during the course of the conference as Flehr and Swain's?

A. Quite extensively, I would say, yes. They were laying on the desk and I had a sample with me of the dipstick. As I recall, I pointed to this dipstick, to the one drawing, and said, "Mr. Grindle can make all the dipsticks he likes patterned after that drawing."

Q. And which of the two drawings did you refer to?

A. I will further identify it by saying it is Defendant's Exhibit (indicating)——

Q. The small one?

A. The small drawing, yes. [565]

Q. 6? A. 6.

Q. And——

A. And then I moved the stick over to the other drawing and said, "I will enter into no agreement with Mr. Grindle to make sticks based on this drawing."

Q. And did you emphasize that in any way by threat of litigation, lawsuit, action or otherwise?

A. I don't recall as I raised my voice. I cer-

(Testimony of C. Martin Welch.)

tainly didn't say any more than that. That is all I said, Mr. Naylor.

Q. Is that your best recollection of what transpired in that particular aspect of the conference?

A. Concerning that particular aspect of it, that would be exactly what transpired as far as I am concerned.

Mr. Naylor: That concludes the direct examination, your Honor.

Cross-Examination

By Mr. Swain:

Q. Mr. Welch, who referred Mr. Grindle to you in the first place, do you recall?

A. Yes; I do, Mr. Swain.

Q. Who was it?

A. John Robb, of American Molding Company.

Q. Did Mr. Robb get in touch with you to say he was referring anybody to you?

A. Not as I recall presently, no. He may have. I thought [566] that Mr. Grindle explained to me that he was sent over, or sent to me, referred to me by American Molding Company, and in the later course of events it was through conversation with Mr. Robb, I determined that he was the person—the individual that had referred me to Mr. Grindle.

Q. Did Mr. Grindle first communicate with you or did you communicate with him?

A. He first communicated with me.

Q. And when you went to see Mr. Grindle, what

(Testimony of C. Martin Welch.)

did Mr. Grindle have on his desk to show you other than the dipstick which you have referred to as having the pockets in the sides? Did he have any other type of dipstick?

A. The drawing, a drawing he had.

Q. Do you recall—

A. I seem to recall he had a wooden type dipstick the likes of which they were currently using at that date, and had been using at that date.

Q. He had only a drawing then other than—

A. He had a drawing of this particular extrusion. He did not have a sample with him at that time similar to that drawing, no, Mr. Swain.

Q. This is Plaintiff's Exhibit 6 to which you are referring?

A. Plaintiff's Exhibit 6, that's correct, yes.

Q. Did Mr. Grindle tell you that there was a dipstick in the process of being made? [567]

A. Seem to recall he did, that when completed I could pick it up, and I believe I recommended he forward it right to Los Angeles.

Q. Did he tell you where it was being made?

A. He may have said his shop; I don't recall.

Q. By "his shop," you mean Pan American's shop?

A. Yes; the plastic department, possibly. I couldn't honestly say whether he told me that or not.

Q. Did he tell you whether the model was very nearly completed or just started, or did he tell you anything like that?

(Testimony of C. Martin Welch.)

A. I thought that the model was in the final stages of being completed.

Q. Prior to this time?

A. I seem to recall that, but it is rather hazy, to give you my——

Q. Prior to this time had you had any experience with dipsticks?

A. None whatsoever with aircraft dipsticks.

Q. Did you have any experience with other types of dipsticks?        A. Yes.

Q. What types?

A. Same type of experience, Mr. Swain, that the average person would have when we check our oil in our car and something like that.

Q. But nothing in a liquid column dipstick, let us say? [568]

A. No; none whatsoever.

Q. Tell me in some detail, if you can, what Mr. Grindle told you about this dipstick at this first conference.

A. That's pretty hard to recall, Mr. Swain.

Q. Well, tell me what you can recall. Well, maybe I could help.

A. I couldn't put it in the exact words or anything. I can give you an idea of what transpired in the conversation out there, and it would be in my own words, not Mr. Grindle's, and it had to do with the—he informing me of the evaporation factor and possibly he informed me of the configurations on the wooden type he was showing me, becoming marred and scratched or scraped up on the filler

(Testimony of C. Martin Welch.)

neck of the fuel tank. But I wouldn't swear to that. He indicated to me then, if not about that, the reasons or several reasons why he was searching for a new type dipstick.

Q. Well, what were those reasons?

A. Well, as I mentioned, it was a group—out of a group; I can mention a group of reasons now I am familiar with, and it must have been a couple of those. One is, in a high, windy day, why, the evaporation factor is so terrifically high on the wooden stick that by the time you pull it out, the fuel level visible wet mark on the stick might be an inch or two below what it was.

Another reason I am aware of now and was aware of [569] reasonably shortly after coming in contact with the dipsticks, is that on a rainy day one would huddle out to the aircraft and huddle off the tank with a dipstick, maybe crouched in his coat here, and would wipe it off under his arms to get the wet mark off from the dipstick so he could then insert it in the tank and get another wet mark onto it.

Q. Did Mr. Grindle tell you that, do you recall?

A. I am giving you a series of things that he may have told me about, why he wanted a new dipstick. The other one is that the oily, greasy hands——

Q. Well, just a moment, Mr. Welch. I would like to stick as close as we can to things that you specifically recall.

A. I don't recall any of them. I can't recall ex-



(Testimony of C. Martin Welch.)

actly any one of those, no. I know that he gave me some reasons why; that I do recall.

Q. And what did he tell you about the construction of this dipstick that he wanted?

A. He was primarily interested in having us extrude the tubing for him as depicted in the drawing at that time.

Q. And did you describe this device shown in Plaintiff's Exhibit 6 to you? You are familiar with this, are you?

A. Yes, I am. He may have—I can't recall. He certainly didn't show it to me. I don't recall ever seeing that even in our Los Angeles plant.

Q. Well, then, when you left him, you weren't very much [570] enlightened, then, on the construction of dipsticks, were you?

A. I knew what was essentially desired from us, yes. I would assume so. And to refresh my memory, I have reviewed the letter, of course, as you would guess, several times, which indicates that he told me that the calibration charts were on this wooden stick, that was being sent down, and from that letter I could possibly get an assist to my memory also by saying that he told me that they were only interested in the tubing described in the drawing, not in me making the dipstick up for them.

Q. Mr. Welch, I hand you Exhibit E, which, as I understand it, is the first letter that was sent by you to the Los Angeles office, and I wish to point out certain things in there. Did Mr. Grindle advise you

(Testimony of C. Martin Welch.)

that the size of the walls could be no greater than 3/16ths of an inch in diameter?

A. Seems very logical he would have, yes.

Q. Well, let's get something straightened out. Was there anybody else at this conference beside you and Mr. Grindle?

A. Not that I recall.

Q. So that unless you knew this one before you went in, Mr. Grindle must have told you?

A. That is an assumption to be considered, yes.

Q. And prior to your visit, you were not familiar with dipsticks of the liquid column type? I believe you have testified to that. [571]

A. No.

Q. So then the remainder of that sentence relating to the mode of operation was apparently imparted to you by Mr. Grindle? A. Yes.

Q. And the fact that there was a wood section or going to be a wood section was imparted to you by Mr. Grindle?

A. Yes. Well, I wouldn't say that—I interpret here, I say, “Can you think of any substitute section in plastics?” So apparently it wasn't determined exactly that there had to be a wood section.

Q. No, but the fact that there was a wood section, which you indicated was going to be in the model—— A. Yes.

Q. ——that was told you by Mr. Grindle?

A. That would have to be, yes.

Q. And the fact that there were going to be

(Testimony of C. Martin Welch.)

graduated paper scales pasted on that wood section; that also came from Mr. Grindle?

A. I would say so, yes.

Q. Was it contemplated at that time that this device was going to have to be sealed in some manner against the introduction by hydrocarbons or gasoline into the scale?

A. Not that I recall. Apparently it wasn't set definitely that it was going to be a paper scale, because this—I would [572] like to stay a little longer on the one sentence—"Can you think of any substitute section of plastic?" I also seem to recall very definitely a metal filler for that—consideration of a metal filler.

Q. But there is no mention of a metal filler in here? A. There isn't in here, no.

Q. You refer to a wood section and then you refer to a plastic section? A. M-hm.

Q. That must refer to the same item, doesn't it?

A. Pardon?

Q. Wouldn't the plastic section and the wood section be the same element?

A. How do you mean, Mr. Swain?

Q. The first line of paragraph 4, you talk about a wooden section? A. Yes.

Q. The third line you talk about a substitute section. A. In plastic?

Q. Yes.

A. The two parts would be entirely different; if you had a plastic section, the hydrocarbons wouldn't bother it.

(Testimony of C. Martin Welch.)

Q. That's right, but you are thinking of substituting a plastic section for the wood section, are you not?      A. Yes. [572-A]

Q. And about the plastic section would also be a paper scale?

A. No; you could imprint it.

Q. What sort of a scale would it be?

A. You could imprint the chart on it. It wouldn't necessarily have to be. You could imprint the figures, configurations on a plastic scale.

Q. You can, but the point is that in this letter you talk about a wooden section which can be substituted by a plastic section, but you make no indication of any change in the paper scale, do you?

A. No; not in this letter.

Q. What do you mean on the last line of that paragraph where it says, "Maybe a square tube enclosed on both ends or"——

A. Difficult to recall. I can give you a supposition that might have existed at the time. I don't know what I meant on this particular occasion.

Q. Well, let me ask you this: Could it mean, then, a square tube in which a graduated paper scale was positioned?      A. It could.

Q. And the tube therefore would have to be sealed at both ends?

A. Assuming now that you intend for me to say that that's the only thing it could mean. I wish you would list some other things it could mean, too. [573]

Q. All right; I will list some and I will give you

(Testimony of C. Martin Welch.)

an opportunity. But that's what it could mean, isn't it? A. Yes. [574]

Q. All right. What do you think it could mean aside from that?

A. Well, it's rather a difficult way of ending a sentence, I know, or, rather, an odd way—ending with a question mark in the air, to explain what I mean by that. I don't know. But a square tube closed on both ends would, to me, become a rod. With orifices, possibly it would be a bar shape with orifices. It would be a multiple tube, I would guess you would call it, with a center section closed.

Q. Well, the only reason you close the ends is to protect something on the inside, isn't it?

A. I wouldn't agree to that. There can be other reasons.

Q. What other reasons?

A. Because I am leery of what you are trying to put in my mouth, Mr. Swain——

Q. Mr. Welch, I am not a skillful enough man to put something in your mouth.

A. O.K., go ahead.

Q. Why else would you seal the ends unless you are trying to keep the gasoline from getting up in there?

A. Well, Mr. Grindle's letter says that they sealed the ends because they wanted to reinforce the ends. It doesn't say anything about keeping the gas from going up, Mr. Swain.

Q. I am talking about this right here.

A. Well, let me say that you would reinforce

(Testimony of C. Martin Welch.)

the ends, [575] that that would be another reason to seal them.

Q. Now, it's my understanding, then, that after only a conference with Mr. Grindle and only after seeing this Exhibit 6 you were able to adequately describe a dipstick which was going to be sent down?

A. I didn't adequately describe it in here. I say nothing about the laminations on it or about the ends being closed on here. I don't read that in here. He could well have told me about the wood and must have told me about the wood filler, Mr. Swain—must have told me about the holes in the side. The drawing I could refer to as giving me enough information to adequately describe that dipstick with his advising me of paper scales and wood couldn't I?

Q. I don't know. I doubt it.

Mr. Swain: I move to strike my grauity, your Honor.

The Court: It may go out.

Q. (By Mr. Swain): Where, on that drawing do you find anything about a wood section?

A. Nowhere.

Q. Nor do you find anything about a graduated paper scale being pasted there? A. Nowhere.

Q. Where do you find anything about a substitute section that may be closed at both ends?

A. Nowhere. [576]

Q. Well, doesn't your letter pretty adequately describe this device which I am handing you, which is Exhibit 5?



(Testimony of C. Martin Welch.)

A. It describes it in this manner, that were I to be told about the wood filler and the calibration charts and given this drawing, I could have described the same thing, as I have in the letter—very simply.

Q. Without seeing the stick?

A. Without seeing the stick, very definitely. This, plus wood filler, is the stick.

Q. All right. Let me ask you, where is Mr. Grindle's office out there at Pan American Airways?

A. At that time it was in a room with the group of engineers. He didn't have an office as such that has been referred to here, but I think we recognize it as his office because regardless of whether there are eight or ten desks in it, it still was his office as well as the other eight or ten.

Q. All right. That's right, but it is in the hangar building?

A. Yes, it is; it is up above; the second floor in the hangar building.

Q. The second floor in the hangar building. And do you know where this dipstick was being made at Pan American Airways?      A. No. [577]

Q. Did Mr. Grindle tell you where it was being made?

A. No; he may have mentioned that one was being made in the shop at Pan American.

Q. Wasn't there any suggestion that you go over and take a look at it?

A. No; absolutely not, Mr. Swain.

(Testimony of C. Martin Welch.)

Q. Weren't you even sufficiently curious to suggest that maybe you ought to go look at it?

A. Not necessarily. Wouldn't help me. I was mainly interested in getting the product in Mr. Kerr's hands in Los Angeles at that time.

Q. Now, I would like to go into the matter of the device which was returned to you by Mr. Kerr, and I believe you know what I am referring to. Would you describe that to me, what was in there?

A. Consisted of four units or pieces, three pieces of plastic tubing, and one piece of wood.

Q. And would you please describe the filler to me?

A. The wood filler?

Q. Yes.

A. The unit came assembled, the wood filler served to position the tubes in alternate corners, to position the round tubes in alternate corners of the square tube. At the time I assumed it to be a spacer. It seems to me, as I recall, it was rather loose in there. [578]

Q. And was it formed generally as shown in Exhibit H?

A. Pardon?

Q. Was it formed generally as the filler which is shown in Exhibit H?

A. I hadn't remembered that it was. I can assume now that it was, but I didn't recall recently that it had been of that exact shape. I interpreted it as a spacer bar only.

Q. Do you recall the testimony which you gave on your deposition?

A. Yes; very definitely; very vividly.

(Testimony of C. Martin Welch.)

Q. Do you recall what you said about the spacer bar at that time?

A. I said that it served to position the tubes, as I remember. I recall drawing a sketch showing a wooden spacer bar positioning the tubes, if that will help you further.

(Conversation among Court and counsel regarding location of deposition.)

Mr. Swain: In that event, your Honor, I would like to check with the reporter this evening and see if it has been filed with the Court and I will delay some of the examination which I wish to utilize the deposition for, if that is satisfactory with you, Mr. Naylor.

Mr. Naylor: Certainly.

Q. (By Mr. Swain): Now, at any rate, after receiving the Kerr device, is it my understanding you immediately went [579] over to your friend, Mr. Klein?

A. I believe we received the device in the city in my office, in San Francisco. It would have been on the occasion of arriving back home from the office during, possibly during the course of the end of the day, towards suppertime, that I went over to his house.

Q. And then when did you see Mr. Grindle next?

A. I saw him within the next several days. You can establish it through correspondence that has been entered here.

(Testimony of C. Martin Welch.)

Q. Can you establish it any closer than "several days"?

A. I would like to place it on the 14th, because the letter to our Los Angeles plant that has been presented as an exhibit states that "I will see Pan American this afternoon on the dipstick."

Q. And when you took that dipstick to Mr. Grindle on the 14th, it consisted only of the four pieces to which you refer?

A. That is absolutely right.

Q. There were no end plugs at all?

A. Absolutely not, Mr. Swain.

Q. And you left that with Mr. Grindle?

A. I left that sample with Mr. Grindle.

Q. Isn't it true you took that sample back subsequently and put end pieces in it?

A. No, it is not, Mr. Swain; not at all. [580]

Q. Did you put any calibrations on it?

A. I could have written—handwritten—handwriting—I recall of handwriting on the wood directly, pencil markings. But I pasted no paper calibrations nor did I receive any from Pan American to paste on there. This is a story made up for some reason by the plaintiff for his benefit. I still haven't depicted why.

Mr. Swain: I move that be stricken as non-responsive.

The Court: It may go out.

Q. (By Mr. Swain): Were you around when any destruction tests were being made?

A. Not that I recall, Mr. Swain.

(Testimony of C. Martin Welch.)

Q. Well, if you had been, don't you think you would recall?

A. I imagine I would have definitely recalled being at the destruction test.

Q. Were you shown a dipstick after it had been tested to destruction?

A. Yes; I seem to remember of having seen it, of it being shown to me by Mr. Grindle.

Q. Now, describe it to me; describe its condition after it had been tested.

A. It is difficult to remember, Mr. Swain, exactly how it looked. My attention was called in a letter of June the 10th to the fact that the ends split on it. I cannot definitely swear that I saw one. As I say, I seem to recall [581] that at a conference or a conversation between Mr. Grindle and I about the stick that was tested—that that ensued. I can't definitely state that I saw it, I don't remember the actual dipstick enough to describe it to you. It is logical to assume that he would have showed it to me, but I can't say.

Q. Well, you have just described it in considerable detail as being substantially identical to Exhibit H.

A. That is the stick I took over to them and it would be the only one they had to destroy or to test to destruction.

Q. And that you can't recall what is meant by the end splitting?

A. The letter of June 10th states that the ends split on it, and it seems to me to help me recall that

(Testimony of C. Martin Welch.)

Mr. Grindle talked with me about the splitting of the ends. But I can't honestly say.

Q. Do you recall seeing it, whether the end was split or not?

A. Not so vividly that I could describe it to you. I may have seen it and I may not have. I couldn't describe it to you from sight.

Q. Were these parts given back to you after this test?

A. No; not as I recall.

Q. Do you know what happened to them?

A. No; I do not. [582]

Q. Now, Mr. Welch, before this was given to Pan American, you knew that a paper scale was going to be put in here, didn't you?

A. Let me put it this way: If we were to use wood, yes. If we were to use metal, no.

Q. Well, since you were using wood, you knew a paper scale was going to be pasted in?

A. If you use wood, you would have to have a paper scale on it, but not necessarily. I will rectify that. I will say unless you painted or imprinted it, imprinted the marks on the wood, you would then have to have a paper scale on it to show the calibrations.

Q. And if you were going to have a paper scale, the ends should be sealed, shouldn't they?

A. It is safe to assume that, Mr. Swain, yes.

Q. Well, is there any doubt about it?

A. Well, there would not have to be, but you wouldn't have a very good stick unless you did; let's put it that way.



(Testimony of C. Martin Welch.)

Q. Precisely. And what kind of a stick would you have to test if this were all you had?

A. You'd have all the stick you needed to test for destruction purposes.

Q. In other words, it is your testimony, then——

A. For the destruction purposes that he wanted, I guess. [583] It is quite clear in that June 10th letter that they tested this.

Q. It is quite clear that they tested it?

A. Tested the piece to destruction, and they stated it split on the ends. And they state nothing in the June 10th letter about the plugs having been put in the ends. They said, "We altered the design to accommodate some plugs—so plugs will be put in the ends," if I am not mistaken. Am I right?

Q. You are testifying; I am not. But did you know how this was going to be tested to destruction?

A. No.

Q. Had no idea of what was going to be done with it? A. No.

Q. Well, is it customary to test something to destruction when it isn't even complete?

A. I wouldn't think so, Mr. Swain. In some cases, but if they were testing the durability of the other parts of that tubing, I would say that they could have easily tested it.

Q. Well, you knew that one of the problems was that this thing fell off airplane wings while it was being used from time to time, didn't you?

A. I knew there was going to be—it was going

(Testimony of C. Martin Welch.)

to be used on wings and then being used, it was logical it would fall off, yes. [584]

Q. Well, one of the hazards if it fell off a wing was that the parts would become loose and tend to separate, wouldn't they? A. That's possible.

Q. And in order to keep this wood filler in, shouldn't you have some sort of seal at the ends?

A. You can make that so tight it would never come out, Mr. Swain.

Q. If you made it that tight, Mr. Grindle (sic), you wouldn't be able to assemble it with a paper sheet pasted in, would you?

A. Not if it was that tight, you would never get the paper in.

The Court: I think we will take the recess now. Mr. Swain. I have a matter at 9:30 in the morning. So 10:00 o'clock?

Mr. Naylor: Very good, your Honor.

(Whereupon, an adjournment was taken to tomorrow, Thursday, March 1, 1956, at 10:00 o'clock a.m.) [585]

Thursday, March 1, 1956—10:00 A.M.

The Clerk: Grindle versus Welch, on trial.

The Court: Proceed.

C. MARTIN WELCH

the defendant herein, resumed the stand and testified further as follows:

Mr. Swain: Your Honor will recall that yesterday afternoon I mentioned the matter of Mr. Welch's deposition. Yesterday evening I called the reporter and asked what happened; they gave me the deposition still in its original cover and indicated that they had written Mr. Welch a letter asking him to come in and look at it. I would like to at least put this in for identification at this time and then ask Mr. Welch concerning it.

Cross-Examination

(Continued)

By Mr. Swain:

Q. Mr. Welch, do you recall receiving a letter from the reporter who took the testimony asking you to come in and see the deposition and sign it and approve it?

A. A letter from the reporter?

Q. Yes. A. No; I don't.

Q. Have you seen the deposition in Mr. Naylor's office? A. My deposition? [586]

Q. Yes.

A. I received a copy from Mr. Naylor and returned it to him.

(Testimony of C. Martin Welch.)

Q. Did you read it? A. What?

Q. Did you read it? A. Yes.

Q. And did you make any corrections or notations on it, do you recall? A. No.

(Thereupon, the deposition referred to above was marked Plaintiff's Exhibit No. 34 for identification.)

Q. (By Mr. Swain): Yesterday afternoon, I believe——

Mr. Naylor: May I interrupt to say that there will be no technical objection with respect to this deposition, but just so that the record will be straight, I have not personally received any letter or copy of a letter from the reporter directed to Mr. Welch concerning the signature, but I certainly am not going to stand on any technicality with respect to the signature or filing.

The Court: Very well.

Mr. Swain: Thank you.

Q. We had gone into the matter of the dipstick which was sent you by Mr. Kerr of Los Angeles. Do you recall that bit of testimony yesterday? [587]

A. Yes.

Q. Now, just to summarize it, it is my recollection that you stated that the device which was sent you by Mr. Kerr consisted of four parts, which were an outside plastic tube, two inner tubes and a wooden filler.

Mr. Swain: Your Honor, I am just asking these questions just to expedite matters, to refresh the

(Testimony of C. Martin Welch.)

witness' recollection and make sure that I am saying the proper thing.

Q. (Continuing): —and that the inner wood filler was loose—loosely fitted, in other words.

A. That was to the best of my recollection, yes.

Q. Now, I will hand you Plaintiff's Exhibit 34 for identification and direct your attention to page 12, line 21. Have you found that, Mr. Welch?

A. Yes, sir.

Q. "Q. Would you describe the sample for us?

"A. Yes; I would. It was a piece of  $\frac{3}{4}$ -inch square clear plastic tubing on which a wood spacer bar was inserted to separate two smaller quarter-inch round pieces of plastic tubing that were inserted in opposite corners.

"Q. Would you like to make a sketch?

"A. Yes."

Mr. Welch, did you make a sketch as a result of those questions? [588]

A. Yes; I did.

Q. And can you find that sketch at the back of the deposition?

A. I have located it.

Q. And that is marked Exhibit No. 4, is it not?

A. Yes.

Q. Does that spacer, which is identified with a wood spacer there, represent the wood spacer which was sent up by Mr. Kerr?

A. It represented what was the wood spacer I received from Mr. Kerr. That was the best of my recollection at that time.

Q. And that drawing does not show any square cuts on the corners to receive the tubes, does it?

(Testimony of C. Martin Welch.)

A. No; it does not.

Q. The spacer appears to be a rectangular piece of wood; is that right?

A. I would say oblong rather than a square rectangle.

Q. Oblong. And yet the side edges which are in proximity to the round tubes are flat and are not cut out?

A. That is right.

Q. Did Mr. Kerr's bid include a wooden filler?

A. I didn't hear you.

Q. Did Mr. Kerr's—excuse me, just a moment. Simultaneously with sending up the sample did Mr. Kerr forward a bid?

A. Yes. [589]

A. To be submitted to Pan American Airways?

Q. No; I asked you if he forwarded you a proposal or a bid to be submitted to Pan American Airways.

A. Yes.

Q. And did you submit that to Pan American Airways?

A. No.

Mr. Naylor: Mr. Swain, I would suggest that you go ahead with the identification of the photo print and I will locate the original and make the substitution if necessary.

Q. (By Mr. Swain): Mr. Welch, I hand you a photo print copy of a document—

Mr. Naylor: Here it is.

Mr. Swain: Strike that, Mr. Reporter.

Q. Mr. Welch, I will hand you an original copy of a document dated May 11, 1948, and ask if you can identify it?

A. Yes.

Q. And that is a proposal then from Plastic



(Testimony of C. Martin Welch.)

Process Co., Inc., to Pan American Airways System, is it not?      A. Yes.

Q. I note that it states as follows:

“We quote you as follows on components ready for assembly of fuel gauge dipstick, no calibrations, per sample; material clear tenite II.”

What is the sample referred to there?

A. The sample that Mr. Kerr had sent along with the quotation. [590]

Q. The sample about which we have been talking this morning?      A. That's right.

Q. I am handing you Defendant's Exhibit I and I direct your attention to the last paragraph, which reads as follows:

“While we do not like to get too involved, I would like to quote on all of the components as that would enable us to furnish an assembly ready for calibration with assurance that all of the parts will go together.”

You followed my reading, did you?

A. Yes.

Q. Now, can you explain how Plastic Process Co., Inc., whom I take it you represented, could make a quotation on all of the parts in accordance with the sample when the sample didn't have a suitable filler?

A. You would have to reframe your question so I could answer yes or no. I can't answer that without explanation.

Q. Well, did the proposal of Plastic Process Co., Inc., include a proposal on a wooden filler?

A. No.

(Testimony of C. Martin Welch.)

Q. I direct your attention to the deposition, page 11, and particularly line 21 thereof—have you found it?      A. Yes; I have located it.

Q. (Reading): “Q. Did he supply you with a quotation in answer to this letter of May 3rd, 1948? [591]

“A. No; he did not. They supplied a quotation later on, not for dipsticks but for component parts: The wood, the tubing, pieces of tubing.”

Did you so testify?      A. I did.

Q. Isn't that at variance with your testimony now?

A. I was in error on the wood after reviewing the “quote.” The quote isn't for wood.

Q. What on the quote indicates that the wood is not to be included?

A. That is correct.

Q. No; I say what is there on the quotation that indicates that the wood is not included?

A. Because the material states tenite—clear tenite II.

Q. But the only exception noted is “no calibrations”; isn't it?

A. I can't answer that question yes or no.

Q. Well, do you see any other exception which is noted?      A. Yes. [592]

Q. What?

A. “Material,” dash “Clear Tenite II.” That is not wood.

Q. I appreciate that, but the quotation says, “No calibrations,” and it is in accordance with a

(Testimony of C. Martin Welch.)

sample which contained a wooden filler of some kind, isn't it? So then wouldn't the quotation include a wooden filler?

A. May I explain my answer?

Q. I wish you would answer it and then you may explain.

A. Would you repeat the question?

The Court: Read it, Mr. Reporter.

(Question read.)

A. No, because the plant we are seeking of that sent this quotation up is not a wood mill, has never processed wood parts, today does not do it, didn't in 1948; they make only plastic materials such as Clear Tenite II and many others. They are not set up, Mr. Swain, to make wood, and never have.

Q. They are not set up to make calibration either, are they? A. No.

Q. And yet they sent up a sample having four parts and indicated that they wanted to bid on the whole thing; the only thing that they excepted were the calibrations, and the sample that they said they would make it to contained a wooden filler, and yet it is your testimony that the [593] quotation did not intend to include the filler; am I right or am I wrong?

A. You certainly are right; it is my testimony that the quotation does not include the wood filler.

Q. Mr. Welch, if the quotation related to the plastic parts, which would then be the only square outer tube and the two inner tubes, why would it

(Testimony of C. Martin Welch.)

be necessary to make the comment in the last paragraph of Exhibit I, which is:

“While we do not like to get too involved, I would like to quote on all of the components as that would enable us to furnish an assembly ready for calibrations with an assurance that all of the parts will go together.”

Doesn't that indicate to you that there is supposed to be a wooden filler which they wished to supply, too?

A. It is possibly in Mr. Kerr's "calibrations" that he denoted the wood filler with the calibrations either stamped thereon or put on in some other way.

Q. Well, let us assume, following your line of reasoning, that he did not intend to supply a wooden filler, what would be the difficulty involved with fixing the other three components so they would fit together?

A. You ask me what would be the difficulty?

Q. Yes.

A. He could have been supplied the wood filler by me so [594] that they would fit, and was supplied the wood filler by me in his first run so they would fit together.

Q. I am talking about Mr. Kerr.

A. He was supplied the wood filler for the first run—a sample of the piece of wood that we wanted for the first run of tubing so that the parts would fit together.

Q. Is it my understanding, then, that Mr. Kerr

(Testimony of C. Martin Welch.)

Q. Actually supplied some dipsticks here aside from the sample we have been talking about?

A. No; he supplied the tubing.

Q. He supplied the tubing and you supplied the wood fillers?

A. I caused to be made the wood fillers, yes.

Q. But back on May 11th, it is your testimony, then, that he didn't care about the wooden fillers; is that right?

A. It is my testimony that on this quotation of May 11th there appears a definite statement that the material he is quoting on is Clear Tenite II, and we both agreed that that is right.

Q. And it is equally clear that his bidding on sample which had a wooden filler in it——

A. He states, "per sample."

Q. And that is also consistent with the testimony in your deposition which I read to you?

A. I could have been in error on the testimony in the [595] deposition.

Q. Did you testify on direct examination as to the length of the wooden filler in the tube which Mr. Kerr sent up?

A. As to the length of it?

Q. Yes. A. I don't recall.

Q. Well, do you recall the length of the filler?

A. I do not recall the length of the filler.

Q. In other words, you don't recall whether it went from one end of the square plastic tube flush to the other end?

A. I don't recall.

Q. It could have been shorter?

A. It could have been shorter.

(Testimony of C. Martin Welch.)

Q. And it could have been longer?

A. It could have been longer; I do not recall. I recall it being not exactly what I wanted, Mr. Swain, and that was the occasion to have some more made up by Mr. Klein.

Q. Did you know at the time you submitted the original letter to Plastic Process Company that the ends of a dipstick of this character would have to be sealed? A. I don't believe I did, no.

Q. When did you first conclude that they would have to be sealed?

A. To the best of my recollection, Mr. Swain, some time between the period of May 14th and, let us say, June the 1st, [596] or June 5th or June the 10th.

Q. Wasn't it apparent to you right from the start that these ends would have to be sealed?

A. Absolutely no.

Q. Well, I direct your attention, then, to page 17 of your deposition beginning on line 10:

“Q. As soon as you received the quotation, then what did you do?

“A. Well, immediately after receiving the dipstick and the letter of transmittal—I wasn't concerned about the quotation because in our previous prior discussions Plastic Process Company wasn't interested in doing any of the assembling; they were willing only to make the component parts. So it was decided between Plastic Process and myself that in order to furnish the finished product, I would have to do the assembling of the component



(Testimony of C. Martin Welch.)

parts, have to take care of sealing off the ends. Naturally, it can be readily assumed that it would have to be sealed off. I got in contact with Mr. Klein first and had him help me set up his saw and I milled out—he or I, I don't recall definitely whether he made—we made six parts, or whether he made two or three of them, I don't know. I made either all or part of the six parts that were made, **out of which** we finally selected one that we thought was best looking [597] to show our principle of having the milled out wood between the tubes.

“Q. When did you get together with Mr. Klein?

“A. This would have been the same day that I received the sample, which I assume to be around a day or a day after—it's right around the 12th of May.”

Then skipping over to page 19, line 14:

“Q. What did he suggest doing after that?”

I might interpolate here, your Honor, that the prior question related to Mr. Grindle.

“A. He suggested that I furnish him a quotation on the part. We discussed the final facts of the feasibility of adapting a paper chart to the wood as such, and of course we discussed also the natural requirement for having to fill the ends.”

Well, now, in your testimony you say “Naturally it can be readily assumed that the ends would have to be sealed off.” Again I ask you, didn't you realize that the ends would have to be sealed off at the time of the first visit?

A. No, it wasn't definitely what the assembly

(Testimony of C. Martin Welch.)

would be at the time of the first visit.

Q. You knew this thing was supposed to be dipped in a gasoline tank, didn't you?

A. That's right.

Q. And in the letter, Defendant's Exhibit E, which I [598] understand you wrote, you state this:

"You will note on the sample that there is a wood section upon which is pasted a graduate paper scale on each of its four sides."

Do you follow me? A. Yes.

Q. And that paper scale and the wooden filler were to go inside an elongated, enlarged cavity in the center of Defendant's Exhibit F which I am handing you; is that right?

A. Yes, it was explained to me at the time. [599]

Q. Is there any indication on there that the ends were to be sealed? Is there any indication on Exhibit F that the ends were to be sealed?

A. None.

Q. If the ends were not to be sealed, or if there was no indication on there that the ends were to be sealed, wouldn't it be assumed that the gasoline would run up on the inside of that larger cavity as well as running into the smaller cavities?

A. May I ask you to advise me of what date you are speaking?

Q. I am speaking of the time when that drawing was transmitted by you to Plastic Process together with the letter, Exhibit E, which you also have in your hand.

A. Would you repeat the question, then?

(Testimony of C. Martin Welch.)

Q. Well, I don't know whether I can repeat it, but I will rephrase it.      A. Rephrase it.

Q. At the time the letter, Exhibit E, and the drawing, Exhibit F, were forwarded to Plastic Products, wasn't it apparent that the gasoline would go up into the interior or center cavity just the same as it would go into the little cavities on the side?

A. That was not my concern at the time. I was concerned only with furnishing an extrusion at the time and the [600] problems involved I was not concerned with.

Q. But you knew there was a paper scale going to go in there, didn't you?

A. To the best of my recollection, I was told that there would be a wood filler and a paper scale to go in there, yes.

Q. And at that time you didn't appreciate that you would have to put some sort of a sealer in the bottom to prevent deterioration of the scale.

A. I wouldn't have to put any sealer in the bottom because I was only asked to quote on the extrusion.

Mr. Swain: Now referring to the original bid, which I think I have handed the witness but I don't think I have yet identified, I ask that the bid or proposal bid of May 11th from Plastic Process Co., Inc., to Pan American Airways be marked, both identified and received, as plaintiff's next exhibit.

The Court: So ordered.

The Clerk: Plaintiff's Exhibit 35.

(Testimony of C. Martin Welch.)

(Whereupon, the bid of May 11th referred to above was received in evidence and marked Plaintiff's Exhibit No. 35.)

Mr. Naylor: No objection. May it be noted that that was previously Plaintiff's Exhibit 3 on a deposition in this case.

Q. (By Mr. Swain): Was that proposal, Exhibit 35, ever [601] submitted to Pan American Airways? A. No.

Q. Why not?

A. 'This is the original copy.

Q. Why wasn't it? A. Why wasn't it?

Q. Yes.

A. I can only answer you to the best of my recollection, Mr. Swain, that during an interim period from May 3rd, the date of first contact with Mr. Grindle, and through the period of having submitted him the first sample, it was either suggested by Mr. Grindle or requested by Mr. Grindle that I consider the making of the complete part. I assume that time to be even between the period of having him submit—receive the first sample I submitted, on or about May 14th. It may have been that day. Does that answer your question, "Why not?"

Q. Not entirely. May I clear it up?

A. If you will, please.

Q. Did you have any facilities for making anything at that time—or manufacturing anything? And I am talking now about May the 10th, let's say, to May the 20th. A. Yes.

Q. What facilities?

(Testimony of C. Martin Welch.)

A. A product like this you would require only room. I had the accessibility, including plenty of room in my basement, to [602] a very complete workshop containing a 9-inch South Bend lathe, table saw, drill press and so forth.

Q. So you had facilities then at Mr. Klein's, as I understand it?

A. Yes; they were available to me at that period.

Q. And at that time did you know what the end product that was going to be ordered by Pan American was?

A. I would like to have you establish a little more definitely of what date you are speaking when you say "at that time"; whether or not you mean during the period from the 14th to June 7th or 10th, before answering the question.

Q. Well, let's take the time of May 11th and the next week after that; that is the time that we have this order that was not given to Pan American. At the time of May 11th to say May 20th, did you know precisely what Pan American wanted?

A. I could have had a close idea but I could not have been aware of the calibrations required.

Q. At that time then did you know that the ends had to be sealed?

A. It could have been, Mr. Swain, that I learned some time between the period of May 11th and June 1st that the ends had to be sealed. I wouldn't strike it on that to a necessary date like May 20th.

Q. So then it is your position that it was Mr. Grindle's suggestion that you make these? [603]



(Testimony of C. Martin Welch.)

A. No, it isn't my position that it was Mr Grindle's suggestion.

Q. I am sorry; I thought that is what you said. What did you say then? Who did suggest that you make these dipsticks?

A. I said I didn't recall. To make the dipsticks?

Q. Yes.

A. I don't recall. I believe it was Mr. Grindle's either suggestion or request that I do the manufacture of the dipsticks.

Q. I direct your attention then to page 17 of your deposition, particularly lines 16 to 18 which I have already read:

"So it was decided between Plastic Process and myself that in order to furnish a finished product I would have to do the assembling of the component parts, have to take care of sealing off the ends."

Does that refresh your recollection?

A. In what manner?

Q. That it was Plastic Process and you who decided this.

A. That could have been after it was requested by Mr. Grindle that Plastic Process or myself engage in the manufacture of the dipstick.

Q. Then immediately after receiving the dipstick and the letter of transmittal, or immediately prior to that, you and Plastic Process had not discussed this; is that right?

A. Has not discussed the manufacture of [604 them?



Testimony of C. Martin Welch.)

Q. Yes.

A. May I say, Mr. Swain, that Plastic Process Company and I discussed the manufacture of them some time during the period of from May 3rd and May 30th, and it was decided by Plastic Process Company that they were not interested in the manufacture of the dipstick.

Q. Could you say that you and Plastic Process had come to that conclusion before May the 14th?

A. I will stand on what I just said, some time between May 3rd and May 30th. Those dates are too hard for me to recall.

Q. Mr. Welch, on your direct examination it is my recollection that you testified that the calibration charts were supplied you by a printing house here in town?

A. For the initial order, yes.

Q. That was the initial order to be supplied to Pan American? A. That is correct, sir.

Q. And that is the initial order of a hundred, and I believe you have said that 54 or some such number were first delivered, and then the others were subsequently delivered some time in the latter part of August, I believe? A. Yes.

Q. You so testified?

A. I so testified.

Q. Did Mr. Grindle ever supply you with the charts for that [605] order? A. Yes.

Q. Then which charts did you use, the ones that you received from the Independent Press Room or the ones from Mr. Grindle?

(Testimony of C. Martin Welch.)

A. He hadn't supplied me with charts, Mr Swain, prior to the first order.

Q. He had or had not? A. Had not.

Q. And the dipsticks which were supplied to Pan American on the first order used printed charts received from the Independent Press Room?

A. The first hundred dipsticks, yes, were with charts printed by Independent Press Room and even pasted on the wood by Independent Press Room.

Q. I direct your attention to your deposition page 31, beginning at line 15:

"Q. Why were you willing to give them this differential in price?

"A. Well, that letter would explain it if you could produce it, sir. I believe I stated therein that out of respect to their having—whether or not it states exactly in so many words, I don't know, but Pan American furnished me the charts initially to make up the dipsticks and that [606] saved a considerable printing cost."

Did you so testify? A. Yes, I have.

Q. Then I direct your attention to page 58, line 5. Do you have that? A. Line 5, yes.

Q. (Reading): "Q. You have referred under direct examination—

"A. I have one other addition to make, Mr Naylor, I was charged approximately \$150 for a printing plate that proved unserviceable in that it was made of such large size that it broke during the

(Testimony of C. Martin Welch.)

first run of paper charts that were made on it.

“Q. Which paper charts are you speaking of now?

“A. The initial paper charts we used on the first 100 dipsticks. They were not supplied by Pan American. They were supplied by Mr. Grindle after this problem of my having to invest in big die plates for running them on a roll press. He assured me that they would furnish me with the charts that were made in another printing matter.”

Did you so testify?

A. This testimony corrected my previous testimony, yes.

Q. That Mr. Grindle supplied you with the charts for the first 100? [607]                      A. No.

Q. Did the printing plate break or didn't it break?

A. It did not break, it warped after it came out of the press. After the first run was made it warped so that it could be used no longer for another run.

Q. On page 31 you say, “Pan American furnished me the charts initially to make up the dipsticks and that saved a considerable printing cost.” Is that a correct statement?

A. I correct it later. It is not a correct one; I correct it later in the same deposition.

Q. And by later do you mean the last quotation I read to you? That is on page 56.

A. I would have to go through this whole deposition, but I will answer your question in this man-

(Testimony of C. Martin Welch.)

ner: If this is the last reference to printed charts, it is the one that corrects two previous references to printed charts having been furnished me by Pan American. In two previous parts of the deposition—still answering your question—I stated that Pan American furnished the initial charts. I correct it on a third portion of the deposition. Hence, my attorney advised me not to bother about establishing with the reporter any correction upon it. I corrected it automatically in the deposition.

Q. But you did testify as I read; there is no doubt about that testimony which I read on those two pages, is there? [608]

A. I testified according to this whole deposition, yes.

Q. Mr. Welch, I hand you Exhibit R-1. Have you seen that drawing before? A. Yes.

Q. In the upper right hand corner of that drawing you refer to a valve control model?

A. Yes.

Q. Do you recall when you first gave consideration to a valve control model as indicated in that drawing? A. I couldn't recall the date.

Q. Was it anywhere around May 12th, 1948?

A. I have no idea, Mr. Swain, just when it was. Somewhere between May 12th, 1948, and possibly the present date you can say. It was some time after May 12th, 1948, I will state in answer to your question.

Q. Well, can you tell me whether it was on the drawing of May 12th, 1948?

(Testimony of C. Martin Welch.)

A. I don't believe this drawing was made on May 12th, 1948; I am not sure. It could have been, but I don't recall it as having been.

Q. When did you first give consideration to such a valve control model? By that I mean what were the circumstances surrounding your first consideration of such a device?

A. I don't recall, Mr. Swain. The only recollections I have that I can directly testify to is where they are [609] documented and I have refreshed my memory with dates. This I cannot help you on because I don't recall the exact date. It is too difficult for me to remember eight years ago.

Q. Do you recall whether the problem was presented to you by a potential customer or whether it was a happy thought that you happened to get while driving up and down the Bayshore, or was it suggested by Mr. Grindle, or how did it arise?

A. It could have been suggested by Mr. Grindle; it could have been suggested by someone else; I don't recall.

Q. Will you explain to me again why you signed this drawing as of the date May 12th, 1948?

A. I didn't sign it as of the date May 12th, 1948, Mr. Swain.

Q. By that do you mean that you didn't sign it on the date of May 12th?

A. That is my signature and that is my writing, "12 May, '48"; but the "12 May, '48" refers to when the first sample was assembled, not to a date I signed it, nor does it refer to a date the drawing

(Testimony of C. Martin Welch.)

was made; it refers to a date the first unit was made.

Q. And was the first unit supposed to be identical to that shown in the drawing?

A. Oh, heavens, no.

Q. Well, do you recall then when you signed it? [610]

A. No.

Q. Do you recall when you did date it actually?

A. Pardon?

Q. Do you recall when you did date it or when you did apply that date?

A. That date was applied on the day I signed the signature I can only assume. I assume it to have been put on there the date I applied my signature.

Q. And what purpose was going to be made of this drawing after it was signed and the date May 12, 1948, was put on it?

A. As near as I can recall, I was urged by Mr. Klein to—I believe he indicated it was a Scotch patent—to mail this drawing to myself when upon his continued insistence I had refused to go to a patent attorney, to get some kind of a Scotch patent, I believe he called it.

Q. Did you insert this drawing in an envelope and mail it to yourself?

A. No, I didn't. That seemed not too feasible for me at the time.

Q. Then for the purpose of obtaining a Scotch patent was it your intention to indicate that the invention of the drawing was conceived on or about May 12, 1948?



(Testimony of C. Martin Welch.)

A. I wouldn't say that that was the only purpose.

Q. Then what——

A. The date of 12 May, 1948, represents, apparently here [611] represents the construction of the first part, the very first attempt at the dipstick; that is, two tubes within a tube with a square piece of wood.

Q. But without any plugs?

A. Absolutely not; without any plugs.

Q. I direct your attention in your deposition to page 51 and particularly to, oh, line 11, let's say. Have you found it?      A. Yes, I have.

Q. (Reading): "Q. (By Mr. Hohbach): Who was the draftsman for this drawing?

"A. Lou Klein, my next-door neighbor. I have already furnished you with his address.

"Q. When was the drawing made up?

"A. When we were making up the dipstick. At the time we made up the first sample.

"Q. I see it is dated May 12, 1948. Was the drawing made up on that date?

"A. Well, I certainly would assume that it is the day I signed the drawing.

"Q. That would mean that the drawing was made up prior to that, is that correct?

"A. It would have to be made up prior to the day I signed it, prior to the moment I signed it."

Do you recall so testifying? [612]

A. You are speaking of generalities during a period of time here, yes.

(Testimony of C. Martin Welch.)

Q. And then it is a generality when you say, "Well, I certainly would assume that is the day I signed the drawing"?

A. I found in four instances that the recorder here, one word would be changed. If I would have said—may I continue?

Q. Yes.

A. If I would have said, "Well, I certainly would assume that it is the day I signed the drawing," it could also have been dictated, with the change of one or two words, "It is the date I put on the drawing when I signed it."

Q. Well, are you claiming then it is a reporter's error?

A. No, I am not claiming that. I am claiming that either—my testimony at the time referred to the date of May 12th on it and I testify, well, I certainly would assume it is the day I signed the drawing.

Reading further back: "Was the drawing made up on that date?"

Excuse me; I have reference to different pages in this—apparently have reference to different pages in this deposition that I recall reading. I don't recall them now.

Q. Well, do you recall, Mr. Welch, whether when you read the deposition over you made any suggested corrections to the parts which I have just read you? [613]

A. I was advised not to make any changes in

(Testimony of C. Martin Welch.)

the deposition unless I considered them absolutely necessary.

Q. Now then, it was my recollection that you testified that the notation "print five" in the lower lefthand corner of that drawing has no particular significance; is that right?

A. I believe I testified I didn't know what it was put on there for. It is like a gravel truck company with two trucks numbering them 10 and 16 to show that they have 16 instead of 2; I don't know, that's just a thought.

Q. Were there any other prints made up at the same time?

A. Skethes only, I recall, but no print as such, no. This "print No. five," I don't know what it was put on there for.

Q. There were no series of prints preceding this? A. Actual prints, no.

Q. Were there any prints after this which bore any number in relation to this print?

A. Quite a considerable number of them, yes.

Q. Made by whom?

A. Some by myself and some by a draftsman I hired.

Q. Do they relate to dipsticks?

A. They do, yes, exclusively.

Q. Do you have them available?

A. Not in the courtroom. We made possibly a hundred of them. [614]

Q. Do they bear any legend or print number on them?

(Testimony of C. Martin Welch.)

A. They all have a print number on them.

Q. Have you checked through them recently to see whether there is a print 1, 2, 3 or 4?

A. Oh, no, they have a far different series of numbers than five. They are numbered, all of them but in a far different series. They start, I believe at a thousand and they go on up to quite a high number, 9700.

Q. Are those prints to which the dipsticks are now manufactured for various companies?

A. That is correct.

Q. Now, Mr. Welch, after you had received the order from Pan American Airways, what did you do next?

A. I believe one of the first things I did was order plastic tubing and wood. They would be the two natural first steps, and three—I should also include three natural first steps, with the width tubing and paper charts.

Q. I hand you Plaintiff's Exhibits 10, 11 and 12. The original order was directed to Plastic Process Company, was it not? May I direct your attention to Exhibit 11?

A. Exhibit 11?

Q. Exhibit 11 is the Pan American World Airways order No. 30015.

A. I have it. Will you take these back?

Q. The question, Mr. Welch, was whether or not that was [615] directed to Plastic Process Company?

A. It was directed to be done so at my request, yes.

Q. At that time did Pan American World Airways System realize that they were supposed to be

(Testimony of C. Martin Welch.)

dealing with you and not Plastic Process Company?  
Did they know that you were going to supply the  
dipsticks and not the Plastic Process Company?

A. When you say "they" I can only say that  
Mr. Grindle knew.

Q. Mr. Grindle knew and yet the order was  
made out to Plastic Process Company.

A. That was the name I was operating on, or one  
of the names that appeared on my door at the time  
—painted on the door.

Q. Were you an employee of theirs?

A. Not a paid employee.

Q. You weren't working for them?

A. Well, you asked me if I was an employee, and  
I say not a paid employee. I meant to say I was not  
on a regular salary with them, no; I was not a  
salaried employee.

Q. Weren't you simply a manufacturer's agent  
up here in San Francisco?

A. You could call it that, yes; I was supposedly  
sales manager of their Northern California Division  
—am today.

Q. Did they pay social security on your salary?

A. No, they take no—— [616]

Q. Did they take any withholding tax on your  
pay? A. No.

Q. Did they pay your rent?

A. I believe at one time they offered me some  
monies toward office expenses, but it wasn't a con-  
tinued practice, no.

Q. That was your business at 55 New Mont-  
gomery Street, was it? A. That is correct.

(Testimony of C. Martin Welch.)

Q. You came and went as you pleased?

A. I do, yes.

The Court: We will take the recess.

(Recess.)

Q. (By Mr. Swain): Mr. Welch, I believe we were discussing Exhibits 10 and 11 which you have in your hand, were we not? A. Yes.

Q. Directing your attention to Exhibit 10, that is the quotation on the letterhead of Plastic Process Co., Inc., is it not? A. Yes.

Q. Directed to Pan American Airways Engineering Department? A. Yes.

Q. And it is signed at the bottom? A. Yes.

Q. "Plastics Process Co., Inc., by C. Martin Welch, Manager, San Francisco Office"? [617]

A. That is the style I followed at the time, yes.

Q. I direct your attention to the following: "300 dipsticks complete per sample submitted but with printed scale." A. Yes.

Q. What is the sample referred to there?

A. One piece of square tubing, two pieces of round tubing and a section of wood filler.

Q. In accordance with what sample?

A. The one submitted to Mr. Grindle on the 14th of May.

Q. This then was a proposal to submit a dipstick without any end seal at all?

A. That is correct; the end seals did not come in until Mr. Grindle's request later.

Q. I hand you Defendant's Exhibit P.



(Testimony of C. Martin Welch.)

A. Yes, sir.

Q. Do you know when you first received that?

A. Approximately the 11th of June.

Q. That drawing is dated the 7th of June, is it not?

A. That was the date on the drawing, yes.

Q. And it is your testimony that at the time you submitted this order you did not contemplate a stick having ends sealed?

A. That is directly shown in this letter of June the 10th that I did not contemplate it. The letter of June 10th informs that they want them and adds 25 cents apiece to them. [618]

Q. The order from Pan American Airways is dated June 21st? A. That is correct.

Q. And that refers to a drawing 32.061.114?

A. Right.

Q. Is that the drawing which you have in your hand, Exhibit P? A. That is correct.

Q. What does that call for?

A. It calls for calibrations, a graduation chart to be put on the dipstick, with a wood filler, detail 6; and assembly according to the detail on the assembly, and in substance that is it.

Q. It called for some method of sealing the ends, didn't it?

A. Yes, it is in the assembly I just gave you, with details.

Q. And it is your testimony then that the order, Exhibit 11, relates to a dipstick having plugs in the ends? A. That is correct, sir.

Q. Now you stated to me, I believe, a few

(Testimony of C. Martin Welch.)

moments ago that you knew some time between May 3rd and May 30th that the ends had to be sealed; is that correct?

A. I stated to you that some time between May 3rd and June 10th——

Q. I thought you said May 30th.

A. Were we speaking of knowing exactly what type of plugs [619] or discussing plugs?

Q. Discussing plugs and knowing that they would be used.

A. It is entirely possible. We discussed plugs prior to June 10th, yes, but there were none on the original assembly that was submitted. A plug sample was never tested prior to June 10th.

Q. Yet on June 7th you were bidding on a complete dipstick? A. Without plugs.

Q. Without plugs?

A. Yes, sir. I was allowed 25 cents more for putting the plugs in.

Q. Didn't the original drawing call for a block in the end? A. That is correct.

Q. When you filled the order why didn't you put a block in the end?

A. May I call your attention to the top part of the assembly in that drawing?

Q. Yes.

A. It says, "Seal both ends with AN-C-1411 cement, then smooth the cement flush."

Q. May I call your attention to the legend which says, "Block end, two required; cut out similar to 6." Do you see what I am referring to now?

A. Yes.

(Testimony of C. Martin Welch.)

Q. What does that mean to you? [620]

A. That was—I believe I have testified previously accordingly; it was at the time something that was unfeasible to me, the determination of the two called for sealing the ends, and I learned around that time you couldn't do it that way, it was impossible, because AN-C-141, in the first place is not a cement, and, in the second place, it is a specification for a cement to be used with acrylate.

Q. Did you ever take this matter up with Pan American Airways before you submitted the first 54 dipsticks?

A. I believe Mr. Grindle and I may have had discussions about this end sealing, because that was my only excuse for being late with the order, the only reason I couldn't deliver it on the 21st of July—shall I say very definitely the main reason?

Q. But the drawing does call for an end plug, does it not? A. Yes.

Q. And it shows end plug No. 12, does it not?

A. Yes.

Q. And then it calls for apparently a seal of cement AN-C which is to be smoothed flush with the ends of the outer tube, does it not?

A. Which couldn't be done at the time.

Q. Did you try it?

A. May I repeat again in answering your question that I determined first what was referred to with the lettering [621] AN-C-141 cement and immediately knew that it couldn't be done.

Q. Did you ever try it?

A. Mr. Swain, you cannot be ridiculous enough

(Testimony of C. Martin Welch.)

to take an acrylate base monomer having known what I knew then in the plastic business, and try to use it as a cement for cellulose acetate butyrate.

Q. Would you mind answering my question? Did you ever try it?

A. I answered it in saying it would be ridiculous for me to have tried it if we know that the two materials are diametrically opposed, or can obtain that information if we are not that intelligent.

Q. Then I assume that the answer to my question is "No"; is that right?

A. I knew it couldn't be done. To this day it cannot be done.

Q. But you never tried it to see if it could be done by chance, did you?

A. You don't try things that are ridiculous, that are diametrically opposed to each other, Mr. Swain. Two materials that are diametrically opposed you don't try to bond. You look for a bonding agent that is compatible with, not opposed to; you don't try the ones that you know are opposed to.

Q. All right. When did you first find out that they were, as you say, incompatible?

A. Some time between the period of June 10th and, shall we [622] say—this time I will advance a month so that I am sure—but shall we say some time between August 10th and August 28th or August 12th; it could have been immediately thereafter, but to be on the safe side, I would say between June 10th and August 12th I learned what AN-C was.

Q. Are you saying that, Mr. Welch, because you

(Testimony of C. Martin Welch.)

don't want to make a mistake in the future or because you remember that specific period?

A. I would like, may I, to establish that I cannot remember a date eight years back unless it has been documented or it was the birth of my child or it was a major date.

Q. You have given this case a tremendous amount of thought, haven't you?

A. I certainly have.

Q. And even with all that thought and consideration——

A. I still am not able to remember dates way back in 1948 unless I have an assist with a memo or a document.

Q. I hand you Defendant's Exhibit T and I direct your attention to the paragraph under the heading "Re: Pan American Dipstick." It says there, "Re: AN-C-141 cement and ethylene dichloride. No one can tell the difference." Did you try ethylene dichloride?

A. No, because I determined later through another source that AN-C-141 cement was not a cement. I never did receive the Army and Navy specification C-141. [623]

Q. Did you ask for them from Mr. Grindle?

A. No. Ethylene dichloride again is a solvent for but is not recommended as an adhesive for cellulose acetate butyrate—was not then and is not now. It is for methyl methacrylate.

Q. Did you try using ethylene dichloride in any



(Testimony of C. Martin Welch.)

way in connection with inserting a block in the end to seal it?      A. No.

Q. What did you do then?

A. I purchased—eventually ended up purchasing eventually a series of solvents from Braun-Knecht-Heimann, and I selected eventually a solvent I found in a drugstore in Millbrae.

Q. What was the solvent to be used for?

A. I do not care to divulge that information. What was the solvent, did you say?

Q. What was the solvent to be used for?

A. With other materials and other chemicals to produce a cement—an adhesive.

Q. Simply to produce a cement or goop to fill up the ends?      A. A goop filler.

Q. In other words, it was not to be used as a cement to hold a plug or block in place; is that right?

A. That is correct, that initially at the start it was not intended to hold a plug in place.

Q. Did you get anybody's permission to submit or to alter the specifications of the required [624] dipstick?      A. No.

Q. You went ahead happily and made 54 dipsticks that were not in accordance with the drawing and took them out there?

A. They were real happy to get them, too, to the extent that they altered the drawing on September 1st to read like the samples or like the parts so that their inspection would receive them.

Q. Between the time of June 10th and the time



(Testimony of C. Martin Welch.)

the first 54 were delivered, did you go and see Mr. Grindle at Pan American Airways at any time?

A. It is entirely possible I did, yes.

Q. You don't know?           A. I don't recall.

Q. Do you recall whether you acquainted him with the fact that the specifications on the drawing specified incompatible materials?

A. In answering your question, may we establish here that the drawing was supplied me on June 10th so I could get calibrations for making the dipsticks. I was not concerned with any other part of this drawing on June 10th or any date thereafter; it was my problem as of June the 10th to figure out the rest of it.

Q. It was my understanding from your testimony a few moments ago that the order of Pan American Airways was based upon this [625] drawing.

A. That is correct. The drawing was based upon a sample also that I submitted.

Q. And it calls for plugs?

A. Yes, that's right.

Q. Then wasn't it part of your problem to figure out a way to submit completed dipsticks with plugs in the end?           A. It was quite a problem.

Q. Then you certainly must have been concerned with more than the calibrations.

A. I say it was my problem, I said; everything else is my problem but calibrations. Did you not understand me correctly?

(Testimony of C. Martin Welch.)

Q. Apparently I didn't.

A. The dipstick that I was to manufacture, the problems of making it were mine. I was concerned on this drawing only with the calibrations and knew verbally, possibly; but if not verbally, I knew by the letter of June 10th that they had to have blocks in them; but it was up to me, not up to Pan American, to determine a way to put the blocks in them.

Q. I gather from that that when Pan American Airways ordered something to conform to a drawing or in reference to a drawing, that you could supply it in any way you saw fit?

A. They changed that drawing, even the length specification on that drawing, to accommodate the way I made the dipsticks.

Q. I appreciate that, but you determined then it was your [626] problem then and not Pan American Airways' problem how those ends were to be placed?

A. That's for sure; they weren't making them, I was.

Q. But you were making them to their specifications.

A. Well, don't I find you aware, even today, that the drawing that was supplied me on June 10th and based on a sample that I submitted?

Q. But you ultimately went to a block in the end, did you not?

A. I went to a series of laminated parts.

Q. And didn't the series of laminated parts compose a block?

A. No, they weren't made into a block.

(Testimony of C. Martin Welch.)

Q. How were they made?

A. They were pressed individually into the assembly.

Q. Individually into the assembly?

A. Yes. They were not assembled—may I clarify it for you—into a block and then placed in the assembly.

Q. Are you familiar with your patent?

A. Yes.

Q. Mr. Welch, I hand you Plaintiff's Exhibit 2 and I direct your attention to the second column on the first page beginning about line 16.

Mr. Swain: Your Honor, I have an extra copy here that I believe is unmarked, which I can hand you for your use. [627]

The Court: I thought I had one here. I probably have.

Mr. Swain: This will facilitate it anyway.

Q. It says:

“After the measuring tubes and reinforcing bar are assembled within the tubular body 1, the ends of the body extending beyond the length of the bar 2 are filled and hermetically sealed by laminated plugs as shown in Fig. 3. These plugs are composed of the superimposed laminations 21, 22, 23 die cut from sheet plastic to the outline of the end of the bar 2, with a central hole for the round headed nails. The heavy plastic cement layers 25, 26 are interposed between the laminations in sufficient quantity to exude the marginal edges of the laminations. The laminated plugs are then inserted into the opposite

(Testimony of C. Martin Welch.)

ends of the body 1, and the nails 24, 24' are driven into the opposite ends of the reinforcing bar 2. This compresses the laminated plugs so that the cement layers 25, 26 are forced outwardly against the inner surfaces of the body ends and around the tubes 9, 10 and into the intervening interstices."

Is that section of your patent in error?

A. In what manner?

Q. Doesn't it indicate that you take the laminations, glue [628] them together and make a block out of them and then insert it in the end of a square tube? A. Not as I can see, no.

Q. How do you get any other interpretation from these words: "The laminated plugs are then inserted into the opposite ends of the body 1"?

A. Well, Mr. Swain, whatever you are getting at I don't know, but we don't make those dipsticks today, nor did we then, with a nail in them.

Q. Well, forget about the nail. Let's just assume that you don't make them with a nail; doesn't the patent say that you make a plug out of some laminations and then put the completed plug in the ends of a square tube?

A. It says that we shoot a nail through them and I deny that we ever have.

Q. All right, then——

A. It says also, shall we say, that we put a nail through them. I deny that we ever have.

Q. Mr. Welch, let's forget about the nail for a minute and let's just stick to the laminated plugs. Doesn't it say that you make a plug out of some

(Testimony of C. Martin Welch.)

laminations and then insert the complete plug in—and so that you won't have to hunt any further, I direct your attention to line 28 of the second column on the right-hand side of the first page:

“The laminated plugs are then inserted into [629] the opposite ends of the body 1.”?

A. That doesn't say that they are inserted.

Q. It does not.

A. After you have made them into a block, no. It just says they are inserted. You put them in, in other words, would be my interpretation of that.

Q. Let's go back then. This is beginning on line 24. It says:

“The heavy plastic cement layers 25, 26 are interposed between the laminations in sufficient quantity to exude beyond the marginal edges of the laminations. The laminated plugs are then inserted into the opposite ends of the body 1.”

I am asking if that does not mean that a laminated plug is first assembled and then inserted into the end of tube 1?

A. You would have to finish your sentence before I answer, this sentence here, because it says, continuing:

“And the nails are driven in.”

Q. Does that make a great difference?

A. Yes, it does make a great difference in my estimation.

Q. I take it then that this patent doesn't describe how to make a device without nails?

A. It sure does.



(Testimony of C. Martin Welch.)

Q. Where? A. Over here in claim 2. [630]

Q. I am referring to the specification. Does it show you how to make a dipstick without a nail in the end?

A. This one shows how to make one with nails in the end, this particular portion.

Q. I see. Is there any other place in the specification now where it tells you how to make one without nails?

A. I would have to look it over carefully to determine that.

Q. But you don't know that it does or does not; is that right?

A. I would have to look it over carefully to determine whether it did or not.

Q. All right; suppose you look it over then during the noon hour and I will come back to that.

Now is the matter of column drop considered in the manufacture of dipsticks? A. Yes, it is.

Q. When did you first learn about this matter of column drop?

A. Possibly I knew about it initially in physics classes where you transfer fluid from one beaker to another.

Q. And when did you first become aware of the fact that it is necessary to consider the matter of column drop in the manufacture and sealing of dipsticks?

A. It wasn't considered by Pan American necessary on the initial order for 100 dipsticks, nor or



(Testimony of C. Martin Welch.)

any subsequent orders [631] for a year or two after, for that particular type dipstick.

Q. I believe you don't understand my question. I asked you when you first became aware of the fact that it was necessary, and I made no mention of Pan American Airways. I am asking you when you first became aware of the fact that it was necessary in connection with the manufacture and sealing of dipsticks.

A. May I offer to you a particular dipstick?

Q. Well, just tell me when you first became aware of it.

A. Well, I don't recall, Mr. Swain.

Q. All right. Would you like to refer to a particular dipstick among these down here?

A. I would like to refer to the 377 dipstick, Boeing Strato-cruiser 377 dipstick which was the first dipstick—I don't know whether there is one here or not—which was the first dipstick we calibrated with a column drop compensation factor.

Q. Did you calculate the column drop yourself?

A. No, I did not.

Q. Who did it for you?

A. Mr. Grindle I believe either did it or caused it to be done.

Q. I would like to jump back away and take you back to the time when you first visited Shafer's Mill and ask you what you had with you at the time to show Shafer's Mill what you [632] wanted.

A. To the best of my recollection I had several pieces of tubing.

(Testimony of C. Martin Welch.)

Q. Several pieces of tubing? A. Yes.

Q. Did you have any wooden filler?

A. I would like to establish not on the first occasion of my visit—not possibly on the first occasion of my visit with Shafer's Mill, but prior to running the parts for me they found it necessary to have tubing. That is what I meant to say.

Q. Did they find it necessary to have some sort of a wooden filler before they could run the necessary order?

A. No, just the tubing. In order to run it out of wood they would require only the tubing and that would be for sizing purposes, Mr. Swain.

Q. What kind of a pattern did they have?

A. They had no pattern on the occasion of my first going to them.

Q. Did they ever have a pattern?

A. Oh, on later occasions they used the tubing I left with them and a sample of the previous run, and then they set up their molding sticker to that sample and would fit it into the tubes.

Q. Did they have a pattern on July 26, [633] 1948?

A. Yes, they would have had a pattern on July 26th.

Q. What was that pattern?

A. That was the pattern—when you speak of a pattern now, I assume you are referring to a piece of wood, are you?

Q. Yes.

(Testimony of C. Martin Welch.)

A. They had a piece of wood because they billed me for 500 of them I can see on July 26th.

Q. But the reference then to 500 linear foot, one by one, to pattern—do I gather from that that you did not bring them a pattern?

A. Oh, they had no pattern. That is the terminology in a wood mill, “to pattern.” “To pattern” means that they run it to a design; it is not a stock straight piece of wood. It is an expression used in wood mills since I have been associated with them.

Q. Where did they get the design? Did you draw some design for them?

A. I may have. I don’t recall; I may have sketched it out. I told them—showed them exactly what I wanted, and likely I sketched out on a piece of paper, but I don’t recall. It’s logical for me to have.

Q. But you did not take a pattern to them and tell them to duplicate it—a wooden pattern?

A. No. Oh, heavens no. I would have no way of obtaining one unless I got it from another mill with a molding sticker. 634]

Q. Getting back now to the patent, I believe you testified that you never made a stick with nails in the ends?

A. That’s correct; I never have.

Q. Your patent refers to the matter of sedimentary deposit; I believe you have it next in there. Have you ever been bothered with any sedimentary deposit in connection with the use of these dipsticks?

A. No, not that I recall.

(Testimony of C. Martin Welch.)

Q. What do you believe are the chances of their being a sedimentary deposit in a gas tank, in an airplane fuel tank, at the point where these sticks are used?

A. I would assume that the only time there could be would be immediately after it got in there or started to form, because the fuel pumps would clear it, I would assume.

Q. Are these dipsticks to be used anywhere but in connection with measuring fuel in wing tanks?

A. I make sticks to measure the fuel in other tank locations.

Q. And are all of these tanks equipped with sloping bottoms?

A. I make quite a range of dipsticks for different tanks at the present day. I would like to have you clarify your question.

Q. Well, I think the question is clear. I asked whether or not all of the airplane gas tanks for which you provide [635] dipsticks are gasoline tanks with sloping bottoms.

A. No.

Q. They are not?

A. No.

Q. Were they back in 1949, August of '49, when this application was filed?

A. I would have to refer to my office files to find out if the particular stick I have in mind—that allows me not to answer “yes” to your question—I would have to refer to our files to see if we manufactured it prior to August. I doubt it, though.

Q. What was the stick to which you refer?

A. This particular one was a helicopter.

(Testimony of C. Martin Welch.)

Q. A helicopter?

A. I don't recall that we made them in August, '49, but I am not positive, Mr. Swain. They have a flat bottom tank on that, say a flat bottom, but a horizontal tank, not a sloping one, or at least so had in the particular helicopter I made this stick for.

Q. I direct your attention to the last page, column three, line 35; you state:

"The body 1, tubes 9, 10 and the laminated plugs are preferably composed of butyrate plastic material which may be bonded and cemented together by amyl acetate as a solvent assuring proper chemical reactions [636] to that end."

Q. Did you use amyl acetate?

A. I tried it, yes.

Q. Does it work?           A. It will work.

Q. I detect from the tone of your voice that it may not be the best, is that right?

A. As such, it could not be—it may not be the best, that's right. I used it in one of my formulae to make a cement, or I did use it at that time, I should say.

Q. Could I make a dipstick by simply using amyl acetate; that is, a dipstick that would be commercially satisfactory?

A. No, you could not simply by using it. You would have to use other parts, if that's what you mean. You couldn't just take amyl acetate and make a dipstick. You would have to have many other parts to form a dipstick.

Q. Well——

A. You mean to bond the end part with?

(Testimony of C. Martin Welch.)

Q. I mean to bond the ends.

A. You could temporarily bond the ends with one—with the use of a plug; is that what you mean, and a square tubing, to fit in the end?

Q. In the manner taught in your patent. Let's study your patent. Could I make a suitable dipstick taking the parts which are shown in your patent and cementing them together [637] with amyl acetate?

A. Yes.

Q. It would be commercially satisfactory?

A. Satisfactory, shall we say, as the first ones that I manufactured, yes.

Q. Are you referring, then——

A. To the first hundred.

Q. To the first order?

A. The first order and second order, possibly, I don't recall when we improved on the end sealing exactly, but it was around latter '48, or early '49, that we improved in our method of sealing it.

Q. Now, while we still have the patent in our hands did you ever mention the existence of this patent to Mr. Grindle before the date he got in touch with you, which I think you have identified as being a telephone call which you received while a new salesman was in your presence. Do you remember that instance?

A. Yes, I remember that instance.

Q. Did you ever mention the existence of a patent, to Mr. Grindle, prior to that time?

A. I gave him—I can't recall the exact date; I believe it to be in early '51 and he made a comment to me, "I see you have a patent."



(Testimony of C. Martin Welch.)

Q. Do you recall where that was? [638]

A. As near as I can recall, it was in the engineering offices of Pan American.

Q. Do you know who else was present?

A. William—that heard it? I wouldn't swear that anyone else heard it, but I know present in the room at that time were several other people, but whether they heard this remark or not I have no way of knowing.

Q. Was there anyone else in the immediate group that was discussing things with Mr. Grindle?

A. Yes. I seem to recall one fellow, Aboudera, that was in the particular corner of the room here.

Q. Was he a part of the discussion group that was going on about this dipstick?

A. Prior to Mr. Grindle's comment?

Q. Yes.

A. They were commenting on the color coding around the top of the dipstick and I had just submitted to them. And there again, may I establish that my records show that that was in early 1951 or I wouldn't be able to give you the date.

Q. Then if there was such a comment made by Mr. Grindle——

A. There were other times; I believe that he and Miss Simpson——

Q. Let's talk about this one time that you have testified about.

A. All right, sir. [639]

Q. If such a comment was made, is it your

(Testimony of C. Martin Welch.)

impression that Mr. Aboudera would have heard it?

A. I don't recall. I have no way of recalling that.

Q. But he was in the little group that was discussing it?

A. He was near us when we were speaking in the group; in that corner of the room, I would say.

Q. And he was taking part in the discussion about the color coding?

A. He had commented on it. I believe that—if I may add this—Mr. Grindle was—it could be that he wasn't in the group initially.

Q. Who wasn't in the group? Mr. Aboudera?

A. No, Mr. Grindle. It could be that he walked in because he wasn't employed at that time in that particular section of Pan American; he was employed in the flight engineering office, if I recall. This conversation on the patent was between Mr. Grindle and myself, as I recall.

Q. At the time that Mr. Fox communicated with you after Mr. Grindle's first telephone complaint to you, did you take Mr. Fox anything else than the drawing which you have identified as Defendant's Exhibit F? If I made a mistake in my question—said the first time. I mean at either of the two times that you saw Mr. Fox. Is that clear to you, Mr. Welch?

A. Frankly, no. I ask you to repeat it? [640]

Q. All right; I will repeat it. I believe you testified that Mr. Fox called you by phone and asked you to come to Pan American Airways?

(Testimony of C. Martin Welch.)

A. I did that.

Q. Shortly after Mr. Grindle communicated with you by phone, and subsequently you went to Los Angeles, that the exhibit which you have in your hand, the number of which I forget——

A. Defendant's Exhibit F.

Q. ——and took that to Mr. Fox; is that right?

A. That is.

Q. I am not trying to give you the whole substance of what occurred. I am merely——

A. I supplied him with one copy, yes.

Q. All right. Did you supply him with any other copies?

A. I don't recall of having supplied him with anything else but one photostat of this print, Mr. Swain, at that time.

Q. Did you have available to you at that time the drawing which Mr. Klein made, Exhibit R-1?

A. I can say that I very likely had it available to me, yes, a copy of the drawing.

Q. Did you take that to Mr. Fox?                      A. No.

Q. Did you ever show that drawing, Exhibit R-1, to anybody [641] at Pan American Airways prior to the institution of this litigation?

A. I can't remember of it ever having been necessary, so I logically wouldn't then, would I? I don't recall it, Mr. Swain. It is not logical that I would.

Q. Well, sometimes people do illogical things, and I would like to ask you whether you ever showed it to them or not?

(Testimony of C. Martin Welch.)

A. I don't recall having shown it to anyone at Pan American.

Q. Did you ever show it to Mr. Grindle?

A. Not that I recall.

Q. Can you be sure about that, Mr. Welch, that you never showed——

A. I can't be positive of it; I just don't recall it, Mr. Swain.

Q. Didn't Mr. Fox at that time show to you a copy of Pan American drawing No. D32.61114?

A. If you will add to that revision B Change, I will answer your question.

Q. I will accept the amendment, B Change, or A Change.

A. A Change, is it? Whatever it is, yes.

Q. Did that recall to your mind the existence of the Klein drawing?

A. There would be no requirement for it to have done so. [642] I don't understand your line of question, Mr. Swain.

Q. Yesterday afternoon you testified concerning a conference in our office at which my partner, Mr. Flehr, and Mr. Hohbach, Mr. Grindle, you and Mr. Freitas were present, I believe?

A. That is correct.

Q. And I wish you would go over again in your own words what you said—and I believe that yesterday you testified concerning the situation in which you had a dipstick in your hand and you pointed to two different drawings on the dipstick——

A. Using it only——

(Testimony of C. Martin Welch.)

Q. Would you go over that colloquy again for me?

A. I said, "Mr. Grindle can manufacture all the dipsticks he likes made like or from this drawing"—I pointed then to Defendant's Exhibit F—"but," I said, "I will under no circumstances enter into any agreement with Mr. Grindle to produce dipsticks to this drawing"—and I am referring now to Plaintiff's Exhibit 8.

Q. What did you mean when you said that?

A. Is that Exhibit 8? Excuse me. That is Exhibit 8?

Q. Yes, Mr. Welch. What did you mean when you said that?

A. Simply that I had no claim to a design such as this appearing on Plaintiff's Exhibit F—Defendant's Exhibit F.

Q. But you did claim rights to the design shown in [643] Plaintiff's Exhibit 8; is that right?

A. To the assembly of it, yes.

Q. And did you also mean to infer that if Mr. Grindle made a device in accordance with this drawing that he would do so in violation of your rights?

A. I can't answer that question for you yes or no. Will you rephrase it?

Q. Did you mean to infer that you would object to Mr. Grindle's making dipsticks as shown or as assembled in Exhibit 8?

A. I meant exactly what I said: I would enter into no agreement to make dipsticks to the referenced drawing.

(Testimony of C. Martin Welch.)

Q. Well, so logical here today. Is it logical to assume, then, that you wouldn't make an agreement—that you would not agree to it and therefore you would disagree, or you would object to his manufacturing those dipsticks? Isn't that a logical inference?

A. I simply stated I would enter into no agreement with him.

Q. I didn't get your answer.

A. I simply stated to him, to the group, that I would enter into no agreement with Mr. Grindle to manufacture dipsticks to the drawing that I referenced.

Q. That is all you meant?

A. That is all I said. [644]

Q. In other words, no one is to logically draw any inferences from that?

A. They can draw what inferences they please, Mr. Swain. I said what I meant, and that's all I said.

Q. All right, Mr. Welch. Isn't it a logical inference that you would object to his manufacturing dipsticks of the type shown in that drawing?

A. That might be assumed, yes.

Q. So that is one of the logical inferences, isn't it?

A. I don't know what you are getting at. Yes, it could be assumed, I think, logically.

The Court: I think when you are getting into the question of inferences, Mr. Swain, you may be



(Testimony of C. Martin Welch.)

technically intruding upon the province of the Court. The Court has to draw the inferences.

Mr. Swain: May it please the Court, I humbly apologize. I certainly had no intention of invading your province. In my enthusiasm I got out of mine.

The Court: No, I know you didn't.

We will take a recess now until 2:00 o'clock.

(Whereupon, an adjournment was taken to 2:00 o'clock p.m.) [645]

Thursday, March 1, 1956—2 P.M.

Mr. Swain: May it please the Court, Mr. Naylor has kindly consented that I may ask your Honor for permission to interrupt the cross-examination of Mr. Welch and put on a couple of other witnesses, three witnesses, whose testimony will be short. They are working men and they are people whom I have called, and they are here on their own time; so I wish to accommodate them as much as I can.

The Court: Very well.

(Previous witness temporarily excused from the stand.)

Mr. Swain: Mr. Aboudara.

**JAMES BRADENBURG ABOUDARA**

called as a witness on behalf of the plaintiff; sworn.

The Clerk: Will you please state your name and occupation for the record?

A. My name is James Bradenburg Aboudara.

(Testimony of James Bradenburg Aboudara.)

I am an engineer for Pan American Airways.

Direct Examination

By Mr. Swain:

Q. How long have you been employed by the Pan American Airways? A. Total, 12 years.

Q. And do you know Mr. Eugene Grindle? [646]

A. Yes, sir.

Q. The gentleman sitting at this table?

A. Yes.

Q. How long have you known him?

A. Oh, about eight years.

Q. Are you familiar with a so-called dipstick used by Pan American Airways, a plastic dipstick of a liquid column type? A. Yes, sir.

Q. How long have you been aware of the existence of such a dipstick?

A. Approximately eight years.

The Court: Approximately how long?

The Witness: Eight years.

Q. (By Mr. Swain): And will you recite for the Court your earliest recollection of such a dipstick?

A. Well, 1948, when Gene was developing it.

Q. By "Gene," you mean Mr. Grindle?

A. Yes.

Q. And where is your office in the—or rather, where was your office, say, in 1948 at Pan American Airways?

A. In the west wing of the hangar upstairs.

Q. Is your office there now?

A. Well, it is changed around somewhat, but

(Testimony of James Bradenburg Aboudara.)

yes, it is still in the same wing.

Q. And was Mr. Grindle's desk in the same [647] area?

A. No, his desk is no longer there.

Q. Was Mr. Grindle's desk in that area in 1948?

A. Yes, sir.

Q. Mr. Aboudara, do you know Mr. Martin Welch?

A. Yes, sir.

Q. The gentleman who is seated at the other table?

A. Yes.

Q. Do you recall a conference or a meeting at your desk, at your office in Pan American Airways, in 1951 at which Mr. Welch displayed a dipstick and pointed out to you the color coding on the dipstick?

A. No, sir.

Q. Do you recall any conference in which Mr. Welch may have participated with you and Mr. Grindle, in which—that is, in 1951—in which it was pointed out that there was a patent number appearing on the dipstick?

A. No, sir.

Q. Did you ever see a patent number on one of the dipsticks supplied by Mr. Welch?

A. Yes.

Q. When?

A. Must have been in 1953.

Q. Why do you say it must have been in 1953?

A. Well, that's when I first had to procure some dipsticks or take steps to procure some [648] dipsticks.

Q. Why did you have to procure dipsticks at that date?

A. Well, I became involved with the 6-B project. We were just getting some airplanes for use in Alaska and I had to take steps to see that the air-

(Testimony of James Bradenburg Aboudara.)

craft and the Alaska line stations were equipped with such dipsticks.

Q. Did you ever have to procure dipsticks prior to this 6-B program you referred to?

A. No, sir.

Q. Do you recall when Pan American Airways instituted this 6-B program of which you speak?

A. In September or October of 1953.

Q. Have you at any time prior to this 6-B program discussed with Mr. Welch or heard Mr. Welch discuss with anybody else the existence of a patent on the dipstick?

A. No, sir.

Mr. Swain: That's all. Thank you.

### Cross-Examination

By Mr. Naylor:

Q. Mr. Aboudara, what were your duties with Pan American in the year 1948?

A. I was an engineer, sir.

Q. And what was Mr. Grindle doing at that time for Pan American?

A. He was an engineer.

Q. And where were you situated in relation to Mr. Grindle in 1948? [649]

A. I was across the aisle and approximately two desks forward of his desk.

Q. But you were both in the same room?

A. Yes.

Q. And when did you first see Mr. Welch and when did you first make his acquaintance?

Testimony of James Bradenburg Aboudara.)

A. In 1948 when—well, I was introduced to Martin by Gene Grindle in 1948 when Gene brought him in there to—well, in the course of the development of the dipstick.

Q. Did you observe Mr. Welch pay any visits to Mr. Grindle's desk after the first introduction you had to him?

A. I didn't understand, sir. Say that again?

Q. Well, as I understand it, Mr. Grindle introduced Mr. Welch to you? A. Yes.

Q. And that was in the year 1948?

A. Yes.

Q. And I assume Mr. Welch was there for some time on that visit?

A. He was there several times.

Q. Well, that's what I mean. Did you see him on the occasion of his other visits to Mr. Grindle's desk? A. I may have seen him, yes.

Q. You didn't have anything to do with the dipsticks at that time? [650] A. That's right.

Q. Now would you say you saw him there one time more or more than one time?

A. Oh, I have seen him more than one time.

Q. Would you say that you saw Mr. Welch call on Mr. Grindle in the year 1949?

A. Yes, early in '49.

Q. When was Mr. Grindle transferred from the division in which he was positioned in 1948?

A. I don't know, sir; I don't remember.

Q. You don't know?

A. (Shaking head in the negative.)

(Testimony of James Bradenburg Aboudara.)

Q. Did you see Mr. Welch call on Mr. Grindle at Pan American in the year 1950? A. No.

Q. You did not? Did you see him at all in 1951?

A. See who?

Q. Mr. Welch. A. Not that I know of.

Q. Not that you know of?

A. Not that I know of.

Q. Did you see him in 1952? A. No.

Q. Do you have any way of being positive about it? A. No, I don't. [651]

Q. Do you have any way of being positive about it as to 1951, that you did or did not see him?

A. No, I don't.

Q. Now as I understand it, your first connection with dipsticks actually occurred in 1953, didn't it?

A. Yes, sir.

Q. And was that assigned to you as one of your regular duties as an engineer for Pan American?

A. Yes.

Q. Namely, the matter of procurement?

A. That's right.

Q. Of the DC-6 dipstick, is that right?

A. That's right.

Q. And was that your first actual acquaintance with the dipstick as a product purchased and used by Pan American? A. Yes.

Q. Had you paid any particular attention to dipsticks prior to this assignment in 1953?

A. No, sir.

Q. I think that's all. Excuse me, just on moment.



(Testimony of James Bradenburg Aboudara.)

Just one further question, Mr. Aboudara. Do you recall having conversations at Pan American with Mr. Welch in reference to a footstool?

A. Yes.

Q. And when did that occur? [652]

A. I don't know. I could find out, but I don't remember the date. It's '50—I don't know, sir.

Q. You have no independent recollection of when it was? A. That's right.

Q. Did you have one conversation with Mr. Welch concerning footstools, or more than one conversation?

A. I think I have had—well, it was more than one.

Q. And was that a project that was assigned to you? A. Yes.

Q. And these footstools were for use in aircraft, I assume? A. That's right.

Q. What were you seeking of Mr. Welch in that connection?

A. The procurement, some design work and converting or fabrication possibilities.

Q. But you can't presently fix the year?

A. That's right.

Mr. Naylor: Thank you. That's all.

Mr. Swain: No further examination.

The Court: You may be excused.

(Witness excused.)

Mr. Hohbach: Mr. Seagrave.

## MARSHALL THORNE SEAGRAVE

called as a witness on behalf of the plaintiff, sworn.

The Clerk: Will you please state your name [653] and occupation for the record?

A. My name is Marshall Thorne Seagrave. I am a staff engineer, Pan American Airways.

## Direct Examination

By Mr. Hohbach:

Q. Do you know Mr. Grindle? A. Yes, sir.

Q. Is he the gentleman sitting here at this table?

A. Yes.

Q. How long have you known him?

A. Nine years.

Q. Are you familiar with the dipsticks used by Pan American? A. Yes, sir.

Q. Do you know whether Mr. Grindle has had any connection with the dipsticks?

A. Yes, sir.

Q. Did you have any connection with Mr. Grindle when he was working on the dipsticks?

A. Yes, sir.

Q. In what particular connection?

A. At the particular time I was assigned to the same engineering group Mr. Grindle was in and during the course of that period I had several conversations with Mr. Grindle about this particular dipstick development.

Q. Did you ever make any trips with him?

A. Yes. [654]

Q. On what occasion?

(Testimony of Marshall Thorne Seagrave.)

A. On an occasion of a visit to San Francisco for two different purposes, one on my account and one on his, which I believe to be the early part of May in 1948.

Q. How do you fix that date?

A. I fix it with respect to the purpose of my visit to a particular project that I was engaged in, in engineering work for Pan American, at that time. The confirmation of that particular engineering work project that I refer to is dated in a published report which describes the nature of this project, and the purpose of my visit in connection with this project was prior to the issuance of this report and was for the obtaining of information relative to certain equipment which had to be used to provide data to be included in this report.

This visit was necessarily prior to the issuance of this report.

Q. What date does the report carry?

A. It carries the date of the month of May, 1948; the specific day of the month is not specified in the report.

Q. But you recall particularly that this trip must have taken place some time before this report was made, is that correct?

A. Yes, it could not have been otherwise.

Q. Could you tell us what occurred in that [655] trip?

A. Yes. Mr. Grindle and I came to San Francisco from the Pan American base in my automobile, and we first went to a plastics fabricating establishment in the neighborhood of the Bay

(Testimony of Marshall Thorne Seagrave.)

Bridge Terminal here in town, I think it was called the American Moulding Company. We went there for the purpose of Mr. Grindle's investigating their capabilities and their willingness to take on the manufacture of this dipstick that you refer to.

Q. Did Mr. Grindle have anything with him at the time?

A. He had a prototype of this dipstick.

Q. Did he have anything else?

A. I believe he had a sketch or drawing showing in detail the cross-section of this dipstick prototype.

Q. Can you describe the dipstick or the prototype that he had with him?

A. Yes, it was in exterior appearance a square rod approximately a yard long, rectangular in section, or square, and it had a central core which ran the length of it, and this core, I believe, was also square. It was smaller than the inside diameter of this square tubing that forms the outside with all of this rod, and separated from contact with the inside of the wall by plastic shims located in the corners. The resultant shape being that there were four longitudinal columns, empty columns, one on each side opposite each flat space of the square rod. [656]

Q. Could you see anything inside of the prototype?

A. Yes, there were graduated scales.

Q. And upon what were the graduated scales mounted?

A. I would say they were printed on paper which appeared to be secured to the outer face of this core.

Testimony of Marshall Thorne Seagrave.)

Q. Do you remember the construction on the end of the prototype? A. Yes.

Q. How were they constructed?

A. They appeared to have been plugged by a retainer which was secured by cement or similar adhesive, and these columns that ran longitudinally on each side of this thing were open and not plugged. That is my recollection.

Q. I hand you a copy of Plaintiff's Exhibit 6. Does this look like the drawing that Mr. Grindle had with him? A. Yes.

Q. What did the drawing show, do you remember, at that time?

A. This drawing was a plan for a proposed extrusion. It showed the cross-section of such an extrusion.

Q. Do you recall that independently of seeing this drawing at this time? A. Yes.

The Court: Identify that exhibit, please?

Mr. Hohbach: Plaintiff's Exhibit—the witness has just been referring to Plaintiff's Exhibit 6.

Q. (By Mr. Hohbach): I hand you Plaintiff's Exhibit 6. Does this resemble the prototype of which you spoke? A. Very definitely.

Q. Does this have a wood filler just like the prototype? A. It appears to have.

Q. Was the prototype about this same size?

A. Yes.

Q. Same length? A. I would say so.

Q. How about the cross-sectional area?

A. I would say it was that.

(Testimony of Marshall Thorne Seagrave.)

Q. Generally the same size? A. Yes.

Q. You stated you went to visit the American Moulding Company. Can you tell us what occurred when you visited American Moulding?

A. We were taken on a tour of their plant and shown the machines they use for fabrication of various plastic articles in two categories—compression moulding and injection moulding. We saw numerous examples of the die maker's art and in various stages of preparation, manufacture and sale, and the manager of the plant described to us the way that they were used, some of the problems that they had in using them, and we were shown a quantity of the bulk raw material [658] used to feed these two different types of machines.

Q. Did Mr. Grindle show the prototype and the drawing he had with him to this gentleman?

A. Yes.

Q. And what did he ask this gentleman?

A. My recollection is that the general tenor of the conversation with the manager of this plant was whether or not the American Moulding Company would be interested in manufacturing dipsticks according to the model represented by the prototype.

Q. And what did he say, do you remember that?

A. He told Mr. Grindle that when the required quantities became evident, that the quantity was too small to interest his company.

Q. Did he suggest anyone else that he could go to for getting an extrusion? A. He did.

Q. Do you know who he suggested?



Testimony of Marshall Thorne Seagrave.)

A. He mentioned a Mr. Welch.

Q. Is he the Defendant here in court sitting at this table? Of course you wouldn't—I am sorry.

A. I am not acquainted with Mr. Welch.

Q. Can you give us a brief resume of your education?

A. Yes. I have had seven years of university training, largely in scientific fields. [659]

Q. Did you study any chemistry during that time? A. Yes.

Q. What type of chemistry did you study?

A. All of the general inorganic chemistry, including analytical branches and approximately four and a half quarters of organic chemistry.

Q. Does your work at Pan American involve elastics? A. To some extent.

Q. Are you familiar with Ethylene Dichloride?

A. Yes.

Q. What is it?

A. A chlorinated hydro carbon.

Q. Are you familiar with cellulose acetate butyrate? A. Yes.

Q. What is it?

A. It is a compound ester of the acetic and butyric acids.

Q. Is cellulose acetate butyrate soluble in ethylene dichloride? A. Yes,

Q. Can ethylene dichloride be used to form a bond between two pieces of cellulose acetate butyrate?

A. It can be used as an agent for that purpose.

(Testimony of Marshall Thorne Seagrave.)

Q. Can you tell us what takes place when such a bond is formed?

A. It is analagous to causing the union of two lumps of [660] sugar by the application of water to the surfaces of these two lumps that would be placed in contact with each other. The action of the water in the case of the sugar is to dissolve it and while it is in a fluid or semi solid state, pressure is applied between the two surfaces that are dissolved a fluid union is permissible. The flow of the dissolved sugar in this case would be exchanged between the parent body of one cube or lump and on side of it, and that on the other, and if they are maintained in close proximity for a sufficient time for this fluid union to take place, and the solvent can then diffuse itself further into each parent body, the semi solid condition will subside back to the original solid condition and a mixture has been effected. It is a physical union and not necessarily any chemical change involved.

Q. And the solvent will gradually evaporate from the union?

A. It is likely that it will; if it is a solvent, it is also likely it is diffused to an unimportant extent, or unimportant concentration, in any spot. Elsewhere in the article, that is, that it's dissolved

Q. Is a bond formed in this manner likely to fade within a period of time?

A. If it is properly made, no.

Q. Did you give any information to Mr. Grind

(Testimony of Marshall Thorne Seagrave.)

at the time he was working on the dipstick in relation to plastics? [661]

A. I believe it is probably likely that I suggested some reference material for his information that he could refer to authorities on the use of plastics and procedures that are common in working with them.

Q. You stated that these procedures are common. Would the bonding of two pieces of tenite together be rather a common problem?

A. Well, it is certainly well embraced and described in fairly voluminous literature which has been in print for a number of years. It is available to the general public.

Q. And as far as you recall, it was available in 1948, is that correct?      A. Very definitely.

Mr. Hohbach: That's all.

Cross-Examination

By Mr. Naylor:

Q. Mr. Seagrave, who was the gentleman at American Moulding with whom Mr. Grindle talked in your presence?

A. He was the manager of their plant. I do not recall his name.

Q. You do not recall his name. May I suggest that it was Mr. Robb?      A. Yes.

Q. Does that refresh your recollection?

A. Yes, it sounds familiar.

Q. Now you spoke of Mr. Grindle seeking the assistance of [662] American Moulding in producing the dipstick according to the prototype which you likened to Plaintiff's Exhibit 5?

(Testimony of Marshall Thorne Seagrave.)

A. M-hm.

Q. Is that your testimony?

A. If you wish to make a technical exception: I would like to amend that testimony.

Q. Yes, sir.

A. All right. The prototype that you hold in your hand, or rather a replica of the prototype, is a fabricated unit; it has been pieced together by separate items of plastic and wood and made into a unit by cementing or gluing it together. The article which Mr. Grindle sought to have produced would have been one piece, not fabricated out of several pieces like this, but pushed through a die in a plastic state, extruded is the proper term, so that it would be made all integrally in one piece, and therefore the prototype is not a dead ringer for the product that Mr. Grindle sought to have made.

Q. Was he seeking the production by American Moulding of the complete assembly or simply the extrusion?

A. I believe that it was the extrusion.

Q. He was not, then, as I understand it, seeking a quotation or an expression of interest from American Moulding in their production of the complete assembly that you say he exhibited to [663] them?

A. I can't answer that.

Q. But it is your understanding that he was seeking their assistance in producing a satisfactory extrusion?

A. I believe so.

Q. And I assume that the conversation or some

(Testimony of Marshall Thorne Seagrave.)

part of the conversation centered about Plaintiff's Exhibit 6, did it not?

A. I would say a good deal of it did.

Q. A good deal of it? A. Yes.

Q. And did Mr. Grindle explain within your hearing to Mr. Robb the nature and characteristics of that extrusion? A. I believe so.

Q. Well, did he make any explanation of it to Mr. Robb? A. Certainly.

Q. And you say a considerable portion of the conversation centered about the print, Plaintiff's Exhibit 6?

A. The main purpose of Mr. Grindle's visit to this plant was to obtain information on the production of this prototype of this extrusion.

Q. And American Moulding declined to do anything about it, didn't they? A. I believe so.

Q. And were you present when they recommended that Mr. Grindle see Mr. Welch about [664] it? A. Yes.

Q. Did he make any recommendations as to any other people? A. Not that I recall.

Q. Did you have any degree of familiarity with the dipsticks that were currently in use as of the time of this San Francisco visit to American Moulding? A. Yes.

Q. Would you mind describing them to the court, please?

A. One particular type, which I believed to be in the most general use at that time, was a square

(Testimony of Marshall Thorne Seagrave.)

rod made of wood with numerals and graduations imbedded or impressed in the wood.

Q. Mr. Seagrave, may I show you Defendant's Exhibit O-1 and also Defendant's Exhibit N-1 and ask you, sir, if it was either of those two?

A. Well, I would say that the articles in general use for this purpose were certainly very similar to this.

Q. No substantial difference that you can recall, is there?           A. No.

Q. Prior to the visit with Mr. Grindle to American Moulding, had you seen in use in connection with the airlines, the various airlines, dipsticks such as Defendant's Exhibit K-1?           A. No.

Q. And Defendant's Exhibit M-1?

A. No, I don't think I recall that one.

Q. And Defendant's Exhibit L-1? [665]

A. I believe I have seen something similar to this.

Q. Yes. Now I would like to ask you, was an indication that Mr. Grindle was seeking to find a satisfactory replacement for sticks of this general nature that were in use as of 1948?

A. Would you mind restating the question?

Q. Yes. At the time of your first visit to American Moulding with Mr. Grindle concerning the dip stick, was it your impression or understanding that Mr. Grindle was actually working on a project for Pan American looking for a suitable replacement for these sticks in common usage?           A. Yes.

Q. Now you spoke about the chemistry of plas



Testimony of Marshall Thorne Seagrave.)

Q. Yes, and you expressed the point of view that ethylene dichloride was a suitable agent for bonding cellulose acetate butyrate. Is that a correct statement of your testimony? A. I think so.

Q. Is your point of view based on theory or practical experience? A. Both.

Q. Have you actually effected a bond between two separate pieces of cellulose acetate butyrate with the use of ethylene dichloride alone?

A. Yes.

Q. When? [666]

A. Specifically as to date?

Q. Yes.

A. I can't tell you. I can tell you within two or three years, perhaps.

Q. Give us your best recollection on that?

A. 1950 or '51.

Q. And what was the nature of the product that you were working on at that time?

A. It was an adaptation of a sliding scale which if necessity had to be transparent and was to be placed behind a magnifying glass which in turn was to be placed over a cathode tube, and instrument we use for engine analysis called an engine analyzer.

Q. I see. Now you did not effect such a bond in the dipstick art, did you? A. Not me.

Q. That's what I say—you did not?

A. No, I did not.

Q. I assume therefore that you have never effected such a bond between two members or pieces of cellulose acetate butyrate for use in the environ-

(Testimony of Marshall Thorne Seagrave.)

ment of the dipstick that we are talking about, is that true?

A. As far as I know, I have never manufactured a dipstick in my life.

Mr. Naylor: I see. I think that's all, your [667] Honor.

### Redirect Examination

By Mr. Hohbach:

Q. After this gentleman at American Moulding recommended Mr. Welch, did you go and see Mr. Welch that day? A. No.

Q. What did you do?

A. We carried out the other half of our joint purpose of coming to San Francisco, which was visit on my part to, I believe, Braun-Knecht-Heimann, to determine whether or not they could make available some gas analysis equipment to us. After that, we returned to our base.

Q. You have formed a bond between cellulose acetate butyrate and another piece of cellulose acetate butyrate by ethylene dichloride is that correct?

A. Yes.

Q. Would the formation of a bond in a dipstick be any different from the formation that you made?

A. If the cellulose acetate butyrate is not adversely effected by the dipstick's environment, by immersion in gasoline and so on, I don't believe that there is any reason to believe that two pieces fused together by an agent which subsequently has departed, should change their chemical action or chemical reaction to a gasoline environment or wherever else the dipstick might be used.

Testimony of Marshall Thorne Seagrave.)

Q. Do you know whether cellulose acetate butyrate is particularly adapted for use in [668] hydrocarbons?

A. That would depend on the hydrocarbons. We have already put on record that one hydrocarbon is solvent for this plastic.

Q. I am speaking of aviation gasoline.

A. It's relatively inert.

Mr. Naylor: That's all, Your Honor.

The Court: You may be excused.

(Witness excused.)

Mr. Hobach: Mr. William Burfeind.

### WILLIAM BURFEIND

witness called on behalf of the Plaintiff; sworn.

The Clerk: Will you state your name and occupation for the record?

The Witness: William Richard Burfeind. I am Senior Engineer with Pan American World Airways.

### Direct Examination

by Mr. Hohbach:

Q. Do you know Mr. Grindle?

A. Yes, I do.

Q. Is he the gentleman sitting at this table?

A. Yes.

Q. How long have you known Mr. Grindle?

A. Oh, approximately nine years.

Q. Are you familiar with the dipsticks used by Pan American?           A. I am.

(Testimony of William Burfeind.)

Q. Did you make a test on the dipsticks? [669]

A. I made a test. It wasn't specifically on the dipsticks, it was to determine if we had any inaccuracies either in the dipsticks or the dipstick calibrations.

Q. On what plane did you make this test? Did you make it on the plane or on the dipstick?

A. No, it was done, the test was made on a Boeing B-377 airplane.

Q. Did anyone work with you in connection with the test?

A. Yes, there were several people. Certain people worked with me in conducting the test and other people participated in the test as witnesses, primarily as witnesses to attest of the accuracy of the test.

Q. Was Mr. Grindle called in on the test?

A. He was.

Q. Why was he called in on the test?

A. Well, he represented the flight engineering group.

Q. Why would they be interested?

A. Well, they were the people that had questioned the inaccuracies of the stick calibration. It was an operational question to combine—question of inaccuracies from the product group and the flight engineers group.

Q. Did you call Mr. Grindle in on the test?

A. Either I did myself or one of the operations

(Testimony of William Burfeind.)

engineers did. I don't recall who personally contacted Mr. Grindle.

Q. Where were you when Mr. Grindle arrived on the test? [670]

A. To the best of my recollection, I was on the wing of the airplane checking the establishment of the test conditions before the start of the test.

Q. Could you describe what you were going to do in this test?

A. Yes, we were first going to establish the empty condition of all the fuel tanks or all the wing fuel tanks of the airplane and then proceed to put in known quantities of fuel in each tank and then cross-check these quantities with the stick and in that way—well, rather than—we had, in fact we had a special stick made up that, rather than show fuel quantities it showed the elevation of the fuel in the tank in inches, and in that way we could cross-check the various calibrations on the stick.

Q. Why did you need additional people to help you on the test?

A. Well, a test of this nature is fairly important, and they didn't aid in the testing as much as they did witness, to attest to the accuracy of it.

Q. Now do you remember Mr. Grindle arriving on the scene?      A. Yes.

Mr. Naylor: Could we fix a date.

Mr. Hohbach: Yes, that is coming up.

Q. (By Mr. Hohbach): Did you say anything to Mr. Grindle when he arrived at the scene? [671]

A. Well, at some time after Mr. Grindle arrived

(Testimony of William Burfeind.)

at the scene, I happened to look at the stick and mention to him very casually that the stick showed that it was patented and showed a patent number.

Q. Is the stick you were using, this dipstick you were using in the test?

A. Yes, it was one of the sticks. In fact, we had several sticks; we had both a normal stick with a normal calibration on it, plus this special stick that showed the calibration in inches and fractions of an inch.

Q. What did Mr. Grindle say when you conveyed this information to him?

A. Well, I can't quote him verbatim, but I know he was very amazed and astounded that the stick was patented, and as far as I know, it was the first time he had been aware of this fact.

Mr. Naylor: Now I move that may go out, Your Honor.

The Court: It may go out.

Q. (By Mr. Hohbach): Mr. Grindle expressed surprise, though, is that correct?

A. Yes, definitely.

Q. How do you fix the date of this test?

A. Well, I have with me my file and I can give you the exact date of the test from the rough draft of my test data, and that date is the 28th of September, 1953.

Q. Can you from that report tell us who was present at that [672] test?

A. Well, there was a Mr. H. J. Hackett, myself—now wait a minute. I got a list of people that



(Testimony of William Burfeind.)

were contacted. Gene Grindle and Howard Ohliger.

Q. Now are you positive that that was the date that the test was conducted?

A. Yes, because at the time I was conducting the test with the dipstick on the wing, Mr. Ohliger was in the cockpit taking cockpit indicator readings, and I have here his rough draft showing the same date, the date that the test was conducted on, September 28, 1953.

Q. Did you have anything to do with the dipsticks before you made this test?

A. No, not as part of my work.

Q. Well, how—did you ever have any contact with the dipsticks before that time?

A. Well, just in casual conversation with Mr. Grindle.

Q. Could I see that, please?

(Conversation among counsel out of hearing of the Reporter.)

Mr. Hohbach: Your Honor, I would wish to state that these are personal files of this individual and we don't wish to introduce them in evidence unless Mr. Naylor insists.

Mr. Naylor: I have no purpose.

The Court: I won't insist providing there is nothing there immaterial that Mr. Naylor may want to bring up. [673]

Mr. Naylor: I am satisfied from this that it was September 28, 1953. Excuse me, Your Honor.

(Testimony of William Burfeind.)

Cross-Examination

By Mr. Naylor:

Q. Mr. Burfeind, are you acquainted with Martin Welch, who is sitting here in Court? A. I am.

Q. How long have you known Mr. Welch?

A. I met him in this—it was just subsequent to September, to the time I conducted this test; the exact date I don't recall.

Q. Were you aware of the fact that Mr. Welch was manufacturing and delivering dipsticks to Pan American prior to September 28, 1953?

A. Yes.

Q. You were aware of that fact? A. Yes.

Q. And I assume from that that you had seen the dipsticks, had you not? A. No.

Q. You had not?

A. No, I had no occasion to see them prior to that.

Q. Did your office have any connections with Mr.—excuse me. Did your office have any contact with Mr. Welch concerning dipsticks?

A. Yes, there was one question that came up, approximately the [674] same time, and that was a question of a repeat in the calibration of the stick.

Q. I see. So that you were aware of the fact that these sticks were being made and purchased and used by Pan American? A. Oh, yes.

Mr. Naylor: I see. That's all.

Mr. Swain: That's all.

The Court: You may be excused.

(Witness excused.)

Mr. Swain: That concludes the three witnesses to which I referred, and now are you ready to go back to Mr. Welch, Mr. Naylor? Unless you have somebody you want to call?

Mr. Naylor: No, I haven't.

### C. MARTIN WELCH

recalled

#### Cross-Examination

(Resumed)

By Mr. Swain:

Q. Mr. Welch, did you have an opportunity to check through your patent during the noon hour?

A. During the limited time I read it over.

Q. I see. And do you recall on—well, let me ask you, Mr. Welch: Were you able to read through from one end to the other?

A. I read only this first page and the second part down to the claim. That's as far as I was able to get before the time came to come back. [675]

Q. I see. And in that portion which you read, were you able to find anything which suggested any method of inserting the end plugs other than that which I pointed out this morning on the first page, column 2, about the middle of that column?

A. No, I found no other manner.

Q. Mr. Welch, I believe that you have testified concerning Exhibit 35, which is a quotation from Plastic Process Company, Inc., which I believe you have testified was never delivered to Pan American

(Testimony of C. Martin Welch.)

Airways, and does the price of \$179 thereon indicate the closed price by Plastic Process to Pan American Airways per unit?

A. Of the plastic parts, Mr. Swain, yes.

Q. I see. At the time the various copies of the drawing D-32.061.114 were handed to you, was Mr. Grindle's name appearing as designer or after the notation "Designed." Do you recall?

A. Would you rephrase that question? Do you recall? I disagree with the first part of it. I don't remember it being handed to me. You mean the one I received in the mail? I would like you to clarify it.

Q. Well, maybe I can make it more simple. I will hand you Exhibit P and ask you if Mr. Grindle's name appears there after the legend "Designed."

A. That's right, it does. [676]

Q. And I will hand you a copy of Exhibit 8 and ask you if it also appears thereon?

A. It does.

Q. In the same manner. Did you ever protest to Mr. Grindle of the Pan American Airways that the designation was erroneous?

A. I was never concerned with it.

Q. I beg your pardon?

A. I was never concerned with protesting to Pan American or to Grindle about it.

Q. You were conscious of it at all times?

A. I am reasonably positive that I noticed it was on there shortly after the first copy I received, yes.

(Testimony of C. Martin Welch.)

Q. Was it on every copy that you received from an American Airways, do you recall?

A. Unless it were taken off of the original film, in the copies it would have to be on every copy I received.

Q. Including, let us say, the drawing which specified the Boeing 377 or whatever it is, dipstick?

A. I assume that it was, yes.

Q. Did you give Mr. Vale a copy of that drawing?

A. Yes. I noticed one in his file. I didn't remember exactly whether I noticed one in his file when looking through it the other day.

Q. Well, I will point out to you a drawing which I have [677] removed from the Baldwin Vale file, which is Exhibit H-1, and ask if that is a B-377 dipstick drawing? A. That's correct.

Q. Does Mr. Grindle's name appear on there as designer? A. Yes, it does.

Mr. Swain: That's all I have.

#### Redirect Examination

by Mr. Naylor:

Q. Do you have the copy of the patent up there, Mr. Welch? A. Yes.

Q. Mr. Swain directed your attention on cross-examination to the description in column 2 of page of Plaintiff's Exhibit 2, which is a soft copy of his patent, and particular attention was directed to the composition of the laminated plug. Do you

(Testimony of C. Martin Welch.)

recall that interrogation? A. Yes, I do.

Q. You recall the questions he put to you?

A. Yes.

Q. Now what was the actual method that was followed in the production of dipsticks with the laminated plug? How did you assemble the physical structure?

A. Put a small amount of cement into the opening we were to seal and then put in a layer of—one of these laminated plugs, we call them.

Q. Are you referring to one of the plugs such as you identified [678] here yesterday?

A. Yes, I am. We put it—

Q. Excuse me. You say you put in one of the laminations or wafers? A. Wafers.

Q. And what did you do next?

A. Add more cement to the cavity and add another, as you call it, wafer.

Q. Or layer?

A. And add still another, and then put another wafer in and then under quite high pressure, we condensed the three units.

Q. Did you put the pressure on the topmost dipstick before applying any outside sealing material?

A. No.

Q. When did you put the pressure on?

A. After the particular plugs had been put into the cavity and layers of cement had been—daubs of cement had been in between each layer.

Q. Did you ever make a dipstick in which you first build up a sandwich, if you will, or a lamination



(Testimony of C. Martin Welch.)

plus, and then inserted it in the cavity at the end of the stick?

A. No, I have never made them that way.

Q. Well now, insofar as the patent, if it does—insofar as the patent speaks of that practice, is that your language [679] in the patent or is it Mr. Vale's?

A. Well, this whole patent is very definitely Mr. Vale's language, Mr. Naylor.

Q. Well now, let's take even Mr. Vale's language. Let's assume that, working with the materials that we are talking about, if you were going to go through the procedure of building up a lamination, and by "lamination" I mean a plastic disc or wafer and then a layer of cement, another plastic wafer or disc, cement and so on—and then you then had an assembly or a built up plug, and let us assume that in strict accordance with Mr. Vale's language that that assembly were put in the end of the stick; what would happen when pressure was applied to it?

A. The assembly would have to be a wet assembly. You would have to have wet cement, moist cement on it, and then as you put the pressure on, the parts would be squeezed together and exude the material out the sides, as Mr. Vale so adequately describes would cause the cement to go against the inner surfaces of the body and into the intervening interstices, as he calls it.

Q. In other words, the cement, to put it in simple language, would be squeezed out between the layers, would it not?

(Testimony of C. Martin Welch.)

A. That's right, and fill out the cavities that remain.

Q. And if you had allowed the plug to dry, could you do that?

A. Under no circumstances. [680]

Q. I mean harden. Now with reference—your attention was directed, Mr. Welch, to page 3 of the patent and a particular reference was made to the amylacetate. Is it not a fact that, after mentioning amylacetate, this patent, in lines 40 to 43, makes reference to equivalent substitutions that may be available in the plastic art?

A. It very definitely says that, yes.

Q. And the language occurs in lines 40 to 43, does it not?

A. Yes, I would say. [681]

\* \* \*

Q. (By Mr. Naylor): Mr. Welch, Mr. Swain asked you a number of questions concerning the quotation made by Plastic Process Company, under date of May 11th, 1946, to you, which is Plaintiff's Exhibit 35. As I understand it, that quotation was to you, it was sent to you rather than—sent to you by Plastic Process?

A. That's correct.

Q. And the quotation as such was never tendered to Pan American?

A. No, both the white and pink, I believe, and the yellow copies of it were in my files.

Q. Did you ever have an understanding from anything that was said or written to you by Mr. Wenk or Mr. Kerr that Plastic Process Company

(Testimony of C. Martin Welch.)

as distinguished from yourself was interested in making a dipstick assembly?

A. Did I—would you repeat that?

Q. Did you ever understand that Plastic Process Company was interested in making a dipstick assembly as distinguished from the parts?

A. No, they never were. It was—in making an assembly—they were never interested in making an assembly. [682]

Mr. Naylor: May I see Plaintiff's Exhibit 12, Mr. Clerk? That's the Pan American letter.

Q. (By Mr. Naylor): Mr. Welch, directing your attention to Plaintiff's Exhibit 12, which is the June 10, 1948, letter from Pan American, and specifically to paragraph 2 of that communication, is there a reference there to an alteration of the design? A. Yes, there is, Mr. Naylor.

Q. And is there a reference in that paragraph to the original sample?

A. Yes, there is, Mr. Naylor.

Q. And is there a reference there to the nature of the alteration that had been made by Pan American?

A. The reference is there that they request that I incorporate solid plastic blocks in each end for additional strength. That is the alteration from the original sample.

Q. And is there a reference in that paragraph to an increase in price suggested by Pan American because of that alteration?

A. It further states, "We are assuming that this change will not increase the cost by more than 25

(Testimony of C. Martin Welch.)

cents per unit. Please advise if any further price adjustment is necessary."

Q. I direct your attention to what purports to be the original of Plaintiff's Exhibit 11 in this case and will ask you if you can identify that. [683]

A. Yes, this is the original purchase order that we received from Pan American.

Q. And that is for 100 dipsticks, the original order? A. That's right.

Q. Now specifically, will you note the price as it is typed in the right-hand column of the purchase order? A. I do notice the price.

Q. And what price is stated there?

A. \$3.25. There has been an erasure on that price. I would like to call that to your attention.

Q. Is that obvious from the original?

A. Quite obvious.

Q. Now you had quoted, actually, \$3, had you not? A. My original quote was for \$3, yes.

A. My original quote was for \$3, yes.

Q. So this is a reflection of the suggested increase in the price of the stick, is that correct?

A. One could certainly assume that the price has been changed from some figure to \$3.25, yes.

Q. But the legible figure is \$3.25 ?

A. That is what is very legible, yes.

Mr. Naylor: I think we might offer that as a Defendant's Exhibit next in order, Your Honor, just because it is the original and shows that erasure on its face.

The Court: Let it be received.

(Testimony of C. Martin Welch.)

The Clerk: Defendant's Exhibit T-1 in [684] evidence.

(Thereupon original copy of letter referred to above was marked Defendant's Exhibit T-1 and received in evidence.)

The Witness: May I have permission to call my attorney's attention to something?

The Court: Certainly.

The Witness: Mr. Naylor, if I may, Mr. Robb in the courtroom. I just saw him walk in. I know he is quite a busy man and I asked him to come down here, which he did, just upon that little phone call I made.

Mr. Naylor: Thank you. I am just about through with my redirect examination.

The Witness: Thank you. I wanted to call that to your attention.

Mr. Naylor: Thank you, Mr. Welch.

The Witness: I would like further, Mr. Naylor, to call your attention that the representatives of the Tennessee Eastman Corporation, one of the head men of that company, is unable to come down today, but he stipulated to me over the 'phone that he would be glad to appear in court tomorrow and state that they—that ethylene dichloride is not recommended——

Mr. Swain: Just a moment, please.

Mr. Naylor: Thank you. I will agree that part of it may go out, Mr. Swain. [685]

The Court: It may go out.

(Testimony of C. Martin Welch.)

Mr. Naylor: Thank you for that advice in the connection. I would like to call Your Honor's attention to the fact that we are trying to crowd this little bit to wind up today, if it is humanly possible and that accounts for some of this crisscross of conversation that is going on.

The Court: Very well.

Mr. Naylor: I wonder if I might withdraw Mr. Welch from the stand for the purpose of accommodating Mr. Robb. I have probably not any more questions from Mr. Welch, but at least one or two to wind up the redirect. Any objection?

The Court: Any objection?

Mr. Swain: No, Your Honor.

The Court: All right, you may stand down.

(Witness temporarily excused.)

Mr. Naylor: Mr. Robb.

### JOHN G. ROBB

a witness called on behalf of the Defendant; sworn.

The Clerk: Will you please state your name and occupation for the record?

The Witness: John G. Robb, Plastic Engineer, for American Moulding Company, in San Francisco.

### Direct Examination

By Mr. Naylor:

Q. How long have you been connected with American Moulding, Mr. Robb? [686]

A. Since 1941.

Q. Since 1941?                      A. Yes, sir.



Testimony of John G. Robb.)

Q. And what has been your position with American Moulding?

A. As a Plastic Engineer I have been doing the signing, tooling and estimating on jobs and scheduling.

Q. And as part of your duties, do you meet new customers who come in with plastic problems?

A. Some of them, yes.

Q. Now directing your attention to the month of May in 1948, were you in a position that required you to meet people coming in with problems to American Moulding? A. Yes.

Q. I would like to ask you if in that month you had occasion to be visited by Mr. Eugene Grindle of Pan American Airways?

A. I couldn't recall the name, but a man from Pan American did come, yes.

Q. And do you see that gentleman here in court?

A. Since that many years, I see so many people, I wouldn't recognize him.

Q. But you do recall a gentleman coming in from Pan American? A. Definitely.

Q. Do you recall the nature of his visit?

A. He came in to secure some plastic tubing for an instrument to measure gasoline in airplane tanks, and we were not making [687] plastic tubing, so I referred him to Mr. Welch, who represented Plastic Process from Los Angeles, on the thought he might have some tubing.

Q. Now for what period of time was this gentleman with you on the occasion of that visit?

(Testimony of John G. Robb.)

A. Just briefly, maybe five minutes or ten minutes.

Q. And did he exhibit anything to you?

A. I don't recall him having done anything except ask for plastic tubing.

Q. I would like to show you specifically Plaintiff's Exhibit 6, which is a print of a drawing that has been identified here, and will ask if you recall seeing that particular print in connection with the purpose of the visit.

A. I don't recall having seen it.

Q. You don't recall having seen it? A. No.

Q. Did the gentleman exhibit to you anything in the way of plastic tubing or a sample device identified as such?

A. Not to the best of my memory.

Q. Not to the best of your memory?

A. That's right.

Mr. Naylor: I think that's all.

#### Cross-Examination

By Mr. Naylor:

Q. What did this gentleman from Pan American ask you? [688]

A. As I said before, as I recall it, he asked me for some plastic tubing, because we were in the extrusion business, and he assumed we could make it, and we did not make any tubing like that.

Q. What kind of tubing did he want?

A. Lucite or acrylic. Lucite is a trade name for acrylic.

(Testimony of John G. Robb.)

Q. What shape and size did he want?

A. I wouldn't recall, that long. I see too many people in that job.

Q. You do actually recall him asking you for some extrusion, is that correct? A. Yes.

Q. And that's all you recall?

A. That's right.

Q. You don't recall the size and shape or——

A. No.

Q. You don't manufacture any type—you don't supply any type of extrusion, is that correct?

A. Not that type.

Q. Square, round?

A. At that time we had no stock items.

Q. Could you procure the items of that type?

A. No, we would have had to go into expensive tooling program to make a short length, and that is why I referred him to Mr. Welch, who was the representative of a competitor [689] who did make that type extrusion.

Q. Did you take Mr. Grindle through the plant at the time and show him what you could do?

A. To the best of my knowledge, no. The best of my memory, I would say no.

Q. Do you recall the incident of the visit very clearly?

A. I just recall it to the extent that I remember him coming down and asking for tubing and referring him to Mr. Welch. After this many years and the number of people I see, I couldn't very well testify under oath as to exactly what I did with him.

(Testimony of John G. Robb.)

The Court: Is that all?

Mr. Hohbach: That's all.

Mr. Naylor: No further questions. Thank you.

The Court: You may step down.

(Witness excused.)

Mr. Naylor: That concludes redirect of Mr. Welch.

Mr. Swain: May it please the Court, when Mr. Welch was on the stand, I read certain portions of his deposition to him and I had him identify one of the drawings attached to that deposition, and I would like to ask that that be marked Plaintiff's Exhibit next in order.

The Court: Can't you put the whole deposition in evidence, including the attached exhibits?

Mr. Swain: Then at this time I offer the deposition [690] which is Plaintiff's Exhibit 34 for identification as—a defendant's exhibit.

The Court: It will be received in evidence.

Mr. Naylor: Agreeable.

The Clerk: Plaintiff's Exhibit No. 34 in evidence.

(Whereupon deposition previously marked Plaintiff's Exhibit No. 34 for identification was received in evidence.)

Mr. Naylor: What number was that?

The Clerk: 34.

Mr. Naylor: 34.

Mr. Swain: Mr. Welch, if you please?

C. MARTIN WELCH

the defendant herein, recalled to the stand; previously sworn.

Recross-Examination

By Mr. Swain:

Q. Mr. Welch, I believe you have testified that in the assembly of dipsticks after the filler with the calibrations and the two tubes were inserted in the outside tube—mind you, I am speaking about the actual construction as to which you testified—some cement is put in and a wafer is put in, more cement, another wafer, more cement and a wafer, and so on until the end plug is built up, is that right?

A. That is the practice I have mentioned. [691]

Q. And then pressure is applied?

A. Extensive pressure is applied, yes.

Q. Let's assume much the same series of circumstances, in which you had a wooden filler with the calibration, the two tubes properly positioned and the outer tube there. If you put a body of cement in and then put one large plug in on top and applied pressure, wouldn't the adhesive come up the sides and seal between the side edges of the large plug and the interior walls of the square extrusion?

A. No, I am quite sure you would find it taking the path of least resistance, going right down the side, covering your paper and your wood. As a matter of fact, that is one of our problems, Mr. Swain.

Q. Well then, in the assembly which you describe and which you follow, when you put cement in and

(Testimony of C. Martin Welch.)

put the first wafer in, does your cement run down the sides?

A. When we get too much of it, it does, yes. That is one of our problems; have to put a very small dab of it on, just enough to hold the plug in there, is all.

Q. Then it is your testimony that a large plug would not work for that reason?

A. It wouldn't work under that method, because it would shoot the cement down. It wouldn't force it up the sides.

Mr. Swain: I see. I think that's all.

Mr. Naylor: No further questions, Mr. [692] Welch.

(Witness excused.)

Mr. Naylor: If the Court please, in winding up the defendant's case, there were two ways in which we could do what I am just about to do. I have here two prior art patents. I could interrogate Mr. Grindle about them, or Mr. Welch, or call an expert. But that's a time-consuming process, and it occurred to me that it would be far preferable than to have these patents come in by way of interrogation, to offer the printed copies of the two patents for the same purpose that we offered the various dipsticks, to indicate to Your Honor the background environment, the backdrop, if you will, against which Mr. Grindle's work was done as reflected by his April 28th drawing.

And if that is agreeable to Your Honor and it is agreeable to Mr. Swain—I assume it will be agree-



ple to Mr. Swain—I would like to offer these two printed copies, and for sake of continuity on the record, merely direct Your Honor's attention to the parts of them which we think are pertinent and material to illustrate the prior art, the condition of the prior art, and supplement the various dipsticks in that way.

The Court: That's certainly satisfactory to me if it is to you, Mr. Swain.

Mr. Swain: Well, Your Honor, I have not seen these patents and I frankly am a little bit taken by surprise. I [693] don't see the competency or the relevancy of the materiality of these patents. Of course I can hardly speak at length on the subject, not having seen them. But the patent, it seems to me, in suit here, Mr. Welch's patent, speaks for itself, and the only thing that I see that these prior art patents can do is serve to invalidate the patent here, and I do not see how Mr. Welch, claiming to be the inventor, can in any way derogate from the scope of the claims and the scope of the application which he filed.

The Court: I don't think that is the purpose.

Mr. Naylor: That isn't the purpose.

Mr. Swain: Then I missed it.

The Court: If you want an opportunity to examine them, of course you may have it; but in view of the fact that they may or may not be helpful to the Court, I am inclined to receive them and if they are not helpful, why then, of course I will disregard them in my consideration of the entire matter.

Mr. Swain: I appreciate that, and then I am cor-

rect, Mr. Naylor, that you are not introducing these for the purpose of invalidating this patent?

Mr. Naylor: I am not, most certainly. I am introducing them to augment the prior art as it has been identified here.

The Court: That's what I understood to be the purpose.

Mr. Swain: Well then, that's all right, that's satisfactory. [694]

The Court: Let them be received in evidence.

Mr. Naylor: I appreciate that Mr. Swain was not aware that we would put them necessarily to this use, but I would call attention to the fact that in a conference with Mr. Flehr and Mr. Hohbach these patents were called to their attention.

Mr. Swain: I am not objecting to that.

The Court: Well, I don't think there is any use in laboring the point, since Mr. Swain now understands the purpose of the offer.

Mr. Naylor: Yes. I have here an official copy made by the Patent Office for your Honor.

The Court: It will be received in evidence.

The Clerk: It will be Defendant's Exhibit U-1 in evidence.

Mr. Swain: Is there only one?

Mr. Naylor: Only one at a time. The first patent of your Honor, was a patent to D. C. Hyde, No. 3868 of May 26, 1863.

(Whereupon, copy of patent referred to above was received in evidence and marked Defendant's Exhibit U-1.)

The Court: A long time ago, isn't it?

Mr. Naylor: Yes, sir.

The Clerk: The second patent?

Mr. Naylor: And we offer that as defendant's ext. I [695] think it has been so received.

The Clerk: No, but it will be defendant's Exhibit V-1 in evidence.

(Whereupon, copy of patent referred to below was received in evidence and marked Defendant's Exhibit V-1.)

Mr. Naylor: V-1, the second patent in this pair, the patent of E. Schmitt, No. 1423156, dated July 3, 1922.

To point out the significance of the Hyde patent, we would direct your Honor's attention to certain characteristics of the device as illustrated and described in the specification, and on page 1, column 1, lines 50 et seq., of that column, which are the last four lines, statement is made, "In manufacturing my improved wontage engaging rods, for ordinary purposes, I inclose the entire length of the indicating tube (A) within the center of a square fitted rod (B), figure 1."

Continuing at the top of column 2, "Made of wood, metal, gutta percha, or any other suitable material, so that either end of the rod shall be flush with the ends of the inclosed tube." And then goes on to describe the characteristics of the slots that are cut, or rather slits that are cut longitudinally of the stick, to expose the glass tube, and reference is also made in the specification to the calibrations on the several sides or faces of the stick, [696] and particular attention is invited to the fact that

in column 2, of page 1, in the middle of the page commencing at line 26, by personal count, the statement begins:

“The indicating tube (A) in my improved gauge or gauging rod may be closed hermetically at pleasure by the simple pressure of the finger upon its upper end, which is finished off evenly for the purpose, as illustrated in figures 1 and 3 of the accompanying drawings.”

And then it goes on to speak of a spring loaded valve on the top of the device as an alternative way of closing off the tube.

On page 2 of that patent, column 1, lines 13 seq.:

“The tube may be protected and combined with the necessary scales and the rod manufactured in many different forms or styles. In fact, my improved gauging rod may be made wholly of glass or other transparent material with graduated scales marked directly thereon.”

And as I said, that patent is offered to illustrate the prior art.

The second patent, the patent to Schmitt, No. 1423156, Exhibit V-1, is offered to show the idea of an enclosed tube serving a plurality of scales. Here attention is invited to the fact that in figure 1 there is shown a central tube with [697] a fluid column to be captured in it in the manner illustrated in figure 2, wherein the dipstick is inserted in the tank denoted by the numeral 52, and the operator's thumb is placed upon the top opening of the central tube to raise from the tank the column of fluid to a

read against the selected scale," and attention is focused on the fact here that one chart or calibration serves the Stutz automobile, so designated, and still another surface serves Ford and Buick. And hence the patent is illustrative of the art and adds to the art that we had tendered.

That concludes the defendant's case, your Honor.

Mr. Hohbach: Your Honor, I would like to ask a few questions of Mr. Grindle on rebuttal.

The Court: Take the stand.

EUGENE L. GRINDLE

the plaintiff herein, recalled on behalf of the plaintiff, in rebuttal; previously sworn.

Direct Examination

By Mr. Hohbach:

Q. Do you remember Mr. Kerr's testimony in connection with Plaintiff's Exhibit 5?

A. Yes, I do.

Q. Plaintiff's Exhibit 5 refers to this sample which was [698] built up, is that correct?

A. (Nodding in the affirmative.)

Q. Can you definitely recall the construction of the sample dipstick which was submitted to the Plastic Process Company?

A. Very definitely.

Q. Were the ends sealed?

A. Yes, they were.

Q. Did it contain a scale?

A. Yes, it did.

Q. What type?

A. It was a piece of  $\frac{3}{8}$ ths inch square wood upon

(Testimony of Eugene L. Grindle.)

which I personally cemented a paper scale with DC-4 airplane calibrations on it.

Q. How were the fluid columns formed?

A. Fluid columns were formed by laminating pieces of 3/16ths inch plexiglass together, leaving voids in the center of each one.

Q. Could they have been machined?

A. They could not have.

Q. Why not?

A. Well, I don't see that they—I shouldn't say they couldn't have been; I mean, physically they could have been, but in this case they were not, because it is an extremely difficult—when you talk about difficult work—it would be extremely difficult to machine a groove in plexiglass. It [699] is extremely brittle. To do it would take very special equipment.

Q. Did Pan American have this equipment at this time?      A. It did not.

Q. What kind of equipment would it take?

A. Well, it would have required a milling machine type of machine with special grinding tools to get a groove in plexiglass without cracking it.

Q. Mr. Kerr—do you remember Mr. Kerr mentioning seeing some markings in the fluid columns which made him think it was made by a machine?

A. I recall him mentioning that, that they were caused by a machine—they were tool marks.

Q. What might have caused this?

A. It is very possible if such marks existed—and they couldn't have been too obvious or I would have recalled it myself—but in laminating these



(Testimony of Eugene L. Grindle.)

pieces of lucite together, as each layer was put on there, I know that Mr. Montoya then dipped a brush in solvent and coated these surfaces again with solvent just to assure a good seal. And brush marks—because as soon as you touch this solvent to the plastic, it softens, and brush marks could have possibly appeared in the plastic.

Q. They could have appeared as cuts made by a tool, is that correct? [700]

A. They would look to me like tool marks.

Q. But they might have to somebody not familiar?

A. They would look like streaks or something in the plastic.

Q. Were the ends sealed in this dipstick you sent to—

A. Yes, they were.

Q. What was the purpose of the sealing of the ends?

A. There were two purposes. The primary purpose, always, of sealing the ends of the dipsticks or putting plugs in the ends of the dipstick was to accurately position the calibration within the tube. The whole design of this dipstick was to be accurate, and for it to be accurate, the calibrations inside had to be held in extremely close proximity to the end of the stick. Secondarily, because it enclosed a piece of wood with a paper cemented to it, the other purpose of the plugs was to seal the ends so that you wouldn't saturate the paper.

Q. Do you remember Mr. Kerr's testimony in connection with the feasibility of making an extrusion?

A. Yes, I do.

(Testimony of Eugene L. Grindle.)

Q. What was your intent in submitting your drawing, which is Plaintiff's Exhibit 6, to an extrusion manufacturer?

A. It was for the purpose of determining if this section could be extruded, and a price quotation, so that we could determine whether it would be practical to order such an extrusion—and in dealing with outside vendors, who [701] specialize in particular fields, we always solicited their comments or suggestions as would pertain to their particular manufacturing methods.

Q. What did Mr. Kerr say about this extrusion?

A. Mr. Kerr's testimony, he said it would have been literally impossible to make. Or, he didn't say that, say "literally"; he said, I think, practically impossible, or something like that.

Q. The measurements of this extrusion as shown in Plaintiff's Exhibit 6 are critical, are they?

A. Not at all.

Q. Why do you say that?

A. Well, I had determined that as long as the fluid column tubes were 3/16ths of an inch in diameter or smaller, it would be usable, practical to use to support this column of gasoline. I therefore made the cross-section of the fluid columns in this extrusion considerably smaller than that, so the tolerances, plus or minus—a considerable tolerance—to a considerable tolerance—wouldn't have been any problem.

Q. Did you convey this information to Mr Welch on his first visit to you?

(Testimony of Eugene L. Grindle.)

A. I can recall Mr. Welch, when we discussed the drawing, the drawing called for a 64th of an inch tolerance, which I consider sort of an average tolerance for an item of this type, or for extrusions, and I have had many extrusions that I have [702] designed, built, and mostly in metals, however—Mr. Welch questioned the tolerance of a 64th of an inch and I told him if he could meet that there would be no problem, that tolerances weren't a problem.

Q. I show you Defendant's Exhibit F. Is there any notation on there which states whether or not the tolerances are critical?

A. Yes, there is. It says, "Any tolerance is O.K."

Q. I hand you Plaintiff's Exhibit 2, which apparently is a letter from Mr. Kerr to Mr. Welch. Can you tell me what he states in the first paragraph about the standard extrusion which—strike that—what he stated about the extrusion which you had asked for a quotation on?

A. Yes. It just says, "As we could hardly make a die for this section and keep the price within reasonable range, we decided to use the standard extrusions."

Q. Does he state in this letter that it would be impossible to make such an extrusion?

A. No such thing.

Q. What you mean to say is that he actually said that?

A. He only said that tooling would be expensive

(Testimony of Eugene L. Grindle.)

to make the extrusion, then, not that the extrusion would be impossible to make.

Q. Because of limited quantity you were interested in? A. That's correct. [703]

Q. Do you recall Mr. Kerr's testimony on the sample he had made up and sent to Mr. Welch?

A. Yes, I do.

Q. Do you know why Mr. Kerr suggested the use of only two fluid columns instead of four, as suggested in your extrusion?

A. It would be a natural suggestion, using the particular extrusion that he recommended, putting a round tube in opposite corners of the square tube. If he had put round tubes in all four corners, there wouldn't have been enough flat surface left inside to place a calibration on it.

Q. Did you ever receive the quotation which was made by Plastic Process Company, dated May 11th, 1948, and sent to Mr. Welch?

A. No, I did not.

Q. Do you recall Mr. Welch's testimony on what he had submitted to you after you had asked for a quotation on the standard extrusion?

A. Do I recall Mr. Welch's testimony?

Q. Yes, on what he had submitted to you after you asked for a quotation on this standard extrusion, which is shown in Plaintiff's Exhibit 6.

A. I remember what he submitted to me, yes.

Q. What did he submit to you?

A. He submitted these standard extrusions from Plastic [704] Process Company, these square extrusions, and the two pieces of round extrusion.

Testimony of Eugene L. Grindle.)

Q. Were they held together in any manner?

A. They were not.

Q. Did you hear what Mr. Kerr has said he had sent to Mr. Welch?

A. Yes, I recall him saying he sent them with a wooden filler.

Q. Could Mr. Welch have removed this wooden filler before he brought the standard extrusions out?

A. Certainly could have. It had been slid in here; it could just as well have been slid out.

Q. After you received the standard extrusions from Mr. Welch, what did you do?

A. Well, as I testified earlier, I took them to the drafting supervisor, Mr. A. Chong, and gave him instructions and sketches of how I wanted the drawing made to cover the complete dipstick.

Q. You stated under direct examination that you had given an advance copy of the drawing to Mr. Welch, is that correct? A. I did.

Q. I hand you a copy of Defendant's Exhibit P. In what date was this drawing released?

A. This drawing was officially released on or after June 7th, 1948.

Q. How do you fix that?

A. That's the date that the approval signatures were placed [705] on the drawing.

Q. This advance copy you are speaking of, what was it given out before this drawing was released?

A. Yes, it was.

Q. Did that advance copy have end plugs in it?

A. It had thin end plugs, yes.



(Testimony of Eugene L. Grindle.)

Q. Is there any way of establishing that at this time?

A. It would be very difficult, because the ends have been drawn over again, and I wouldn't try to say definitely that I could interpret that from this drawing at this time, but I recall very definitely that they called for end plates.

Q. What caused you to change the end plugs?

A. Well, as I and Mr. Schmitt have previously testified here, in testing this stick to destruction—

Q. What stick?

A. The sample Mr. Welch submitted. We determined that the ends were weak, that the end plate broke out and split the end of the tube, and that it wouldn't, therefore, hold up as with a proper seal, that the thicker end plugs would be required to give additional bonding strength for the purpose of resisting the impact loads of the wooden filler if they were thrown against the ends.

Q. Do you know why the price, 25-cent price increase, was made in the first purchase order given Mr. Welch?

A. Yes. They were for the purpose of covering what I consider [706] would be additional expense in increasing the size of those plugs from thin, I believe it was 1/16th inch plate, to a much thicker plug.

Q. This Defendant's Exhibit P; would you say that this was a copy of the drawing that was first officially released? A. That is.

Q. Why do you say it is the first copy?



Testimony of Eugene L. Grindle.)

A. Because it shows no change in the change block.

Q. Does Exhibit P call for the use of AN-C 141 cement? A. Yes, it does.

Q. Where does it call for it?

A. It calls for it down here where the -12 block is called out and says, "Cut out the block similar to 6 filler and cement to the -8 (which is the square tubing) with AN-C 141 cement all around."

Q. How thick is that block?

A. The block was 11/32nds of an inch thick.

Q. Would AN-C 141 form a suitable bond between the block and the outside extrusion?

A. I am satisfied that it would.

Q. Do you know what AN-C 141 is composed of?

A. I can't tell you exactly, but I can tell you the type of cement that it is.

Q. Will you tell us?

A. Yes. AN-C 141 is a catalyst type cement, consisting [707] primarily of acrylate monomer resin, which is mixed with a suitable catalyst, and it is thinned by ethylene dichloride. A catalyst type cement is a cement that cures by chemical reaction rather than by the evaporation of solvents, and this type of cement, it will fill a cavity without shrinking in the curing process. That is the primary purpose or feature of a catalyst type cement. The curing is by a chemical reaction rather than by evaporation of solvents.

Q. Is this AN-C 141 specification still available?

A. It has been superseded twice since that time,

(Testimony of Eugene L. Grindle.)

but the basic type of material is still the same.

Q. Have you tried to locate a copy of this specification?

A. Yes, I have, after it was suggested in this trial. I contacted the Government Printing Office, found that it was out of print and that there wouldn't be any copies in Washington, but they suggested I might possibly find one at some air force station. I then called the Air Force Technical Library in Oakland, requested that this same information—requested the information from them. They said they no longer carried them in their files, that they had been superseded, and they threw all the old ones away.

Q. I show you Plaintiff's Exhibit 26. You heard Mr. Chong testify about transferring to this drawing by means of red pencil what he could see on the vellum?

A. Yes. [708]

Q. What did he transfer?

A. Oh, he transferred only those things that he could be positive or sure of without misinterpretation of the drawing. We did not represent in this courtroom that he had transferred everything that had previously been on this drawing, only that he transferred what he could be sure of.

Q. So something was written over something that was erased—why, he didn't transfer it because he couldn't make it out, is that correct?

A. That's right. And also, it could have just been a drafting error and an erasure. It wasn't necessarily on any released print of the drawing.

Testimony of Eugene L. Grindle.)

Q. Do you recall the testimony by Mr. Welch concerning how tightly the wood filler was to fit into the wooden extrusion? A. I sure do.

Q. Into the plastic extrusion? I am sorry. Is it necessary that the filler fit tightly within the square extrusion?

A. On the contrary, it's definitely not to fit tight.

Q. Why do you say that?

A. Well, it is quite obvious that if you are going to increase the exterior dimensions of that wooden filler by cementing paper around it, it would no longer fit in the tube, and it should fit in the tube loosely even with the paper around it, so that there isn't any tension placed in the exterior case. [709]

Q. Do you know whether the fillers that are put into Mr. Welch's dipsticks fit tightly into these square extrusions?

A. They fit extremely loosely, much looser than are even called for in my drawing, which gave about, oh, 20 to 30/1000ths clearance in there. He has more than doubled or tripled the amount of clearance that I called for, and they fit extremely loose in the——

Q. Have you examined some of his dipsticks?

A. Yes, I have.

Q. Is this a dipstick which you cut up yourself?

A. Yes.

Q. Is it one of the dipsticks made by Mr. Welch?

A. Yes, it is one of his production B-377 dipsticks.

Q. How do you ascertain that?

A. Up here in the colored ends of the corner

(Testimony of Eugene L. Grindle.)

it shows it as a dipstick for a B-377 airplane, manufactured by C. Martin Welch & Company.

Q. What are these other pieces?

A. Well, these are pieces that were cut out of this particular dipstick.

Q. Will you demonstrate the portion in which the scale has been removed?

A. Yes. I would like to show the court, your Honor, if you would look at that, just how loosely the wooden filler fits in the tubing. If you look in the end, you can see there is [710] well over a 16th of an inch clearance all around the wood.

Q. This was cut out from between these two pieces I am holding here in my hand?

A. Yes, it was. It was just to get a piece of the wood out. We could also take a piece that Mr. Welch has placed in Exhibit—in this exhibit here which was represented as the type of wood he has always used in the dipsticks, and you will see it will fit in exactly the same clearances.

Q. If the wood filler fitted very tightly in the square extrusion, would it be possible to place the paper scale in it?

A. It would be practically impossible unless you had some way of expanding the case and then letting it retract it again after it was in there, which I think would be extremely difficult.

Mr. Hohbach: I would like to offer these in evidence as plaintiff's next in order.

The Court: It will be received.

Mr. Hohbach: And maybe we can mark it at three parts.

(Testimony of Eugene L. Grindle.)

The Clerk: Exhibits 36-A, B and C.

Mr. Hohbach: Mark the A as the longest part and B the section in which the paper scale is removed and C as the shortest part.

(Whereupon, three parts of dipstick above referred to were received in evidence and marked Plaintiff's Exhibits 36-A, B and C as indicated above.) [711]

Q. (By Mr. Hohbach): Have you been friendly with Mr. Welch in the past? A. Yes, I have.

Q. Do you recall Mr. Welch's testimony in connection with your visit to the Transportation Club on May 27th, 1953? A. Yes, I do.

Q. Can you tell us what occurred?

A. What actually occurred or what Mr. Welch said?

Q. Why did you visit Mr. Welch at that time, and did you visit Mr. Welch?

A. I can recall now visiting Mr. Welch on that particular day.

Q. Was that a social visit?

A. I don't consider it as such.

Q. Why did you visit Mr. Welch?

A. Well, it happens that on that particular day I was in the city on another patent matter, had an appointment with Mr. Flehr of your office, to discuss another patent matter, and after we had finished our business I left his office, which is right across the street from the Palace Hotel, in which the Transportation Club is located, and my car was

(Testimony of Eugene L. Grindle.)

parked in a garage, again across the street from the Palace Hotel in the building in which Mr. Welch's offices were located. Being that I hadn't been in the city for quite a few months, as I recall, and I hadn't seen Mr. Welch for some time, I just [712] thought I would stop up and say hello. I was still on a speaking relationship with Mr. Welch.

Q. When did you go in—pardon me. When did you go in and see Mr. Flehr?

A. I had an appointment with Mr. Flehr, I believe, about two-thirty, and I was there until five o'clock.

Q. Did you recently check that?

A. Yes, I have.

Q. I show you a document. Can you identify it?

A. Yes. We found this yesterday in Mr. Flehr's appointment book.

Q. Were you present when we examined the appointment book?      A. Yes, I was.

Q. And what did you find?

A. I found that it shows that I was in Mr. Flehr's office between 2:45 and five o'clock.

Q. And on what day?

A. On May 27th, 1953.

Q. Does that appear on the sheet?

A. Yes, it does.

Q. Was anyone else in the office at that time?

A. Yes, another gentleman. I didn't know who he was at the time. He stopped into the office and Mr. Flehr asked if he could take a few minutes with him, and it wouldn't take very long. I stepped



(Testimony of Eugene L. Grindle.)

to another office and we resumed our [713] discussions after the gentleman left again.

Mr. Hohbach: I offer this in evidence as Plaintiff's next in order.

The Court: Let it be received.

The Clerk: Plaintiff's Exhibit 37 in evidence.

(Whereupon, extracts from Mr. Flehr's appointment book referred to above were received in evidence and marked Plaintiff's Exhibit No. 37.)

Q. (By Mr. Hohbach: After you had completed your call on Mr. Flehr, what did you do?

A. Well, after I left Mr. Flehr's office, I was going over to my car and I thought I would stop at Mr. Welch's office and say hello to him, which I did. And he met him hail fellow, well met, and took me over to the Transportation Club for a drink, and I went over with him. We had one or two drinks and then we left together and Mr. Welch came across the street and chatted with me for a few minutes while I waited for my car to be brought. Then I left and he walked down; he mentioned to me his car was parked a block or so away, so I walked down the way to get his car as I left, and on the way driving down Bayshore Mr. Welch passed me.

Q. Do you know whether Mr. Welch had any trouble with printing up the scales for the first 100 posticks?

A. Mr. Welch came to me and told me the trouble that he had had. [714]

(Testimony of Eugene L. Grindle.)

Q. What did he tell you?

A. He told me that he had had difficulty with the printing plate, that it was very expensive and he didn't see how he could tolerate such expense in regard to this order that he was filling for us.

Q. When did this take place?

A. It took place very shortly after our purchase order was placed with him for the first hundred dipsticks. I don't recall how—it was within a matter of a week or two—how soon it was after that.

Q. Did you do anything for Mr. Welch after that?

A. I told Mr. Welch that I had facilities at Pan American to print the charts for him, and I would take care of that and give them to him.

Q. And did you do that? A. I did that.

Q. What did you give him?

A. I gave him several hundred copies of a chart that was printed in our print shop on a Multilith machine, gave him several hundred copies.

Q. Was this a three-section scale?

A. Yes. We only had facilities at Pan American for printing a plate, oh, legal size plates, about fourteen inches long. So we could only get about thirteen inches of printing on it, and it would require three sections to get the complete dipsticks [71] length.

Q. Was Pan American ever paid for this?

A. They never were.

Q. You did it gratuitously?

A. I did. They did, I should say.

(Testimony of Eugene L. Grindle.)

Q. Did you have an opportunity to examine Mr. Welch's patent application file?

A. Briefly, yes.

Q. Did you notice a Pan American drawing in the file? A. Yes, I did.

Q. Can you identify the drawing?

A. Yes, this is the same one—if this is the same one I saw yesterday. Yes, I can—this is a drawing of the B-377 dipstick, complete dipstick.

Q. Were you still in the engineering department when this drawing was made?

A. I was at that time, yes.

Q. What time was that?

A. Well, as we indicated yesterday, the date on this drawing was a year off. It was actually February 4th of 1949, even though the date on the drawing says 1948. We stipulated that that was in error.

Q. Does this filler show the use of radius grooves? A. Yes, it does.

Q. I show you a copy of a drawing which is entitled "Liquid [716] Column Type Measuring Gauge." How are the grooves formed in that drawing? A. Well, they are square cut.

Q. Did you notice any other drawings in this patent application folder?

A. I don't believe so.

Q. Now, the only drawing which showed the round cut is your Pan American drawing?

A. Yes. As we have seen, the first release of that

(Testimony of Eugene L. Grindle.)

drawing showed square-cut corners, the second release of the drawing showed radiused corners.

Q. Which drawing are you speaking of now?

A. Plaintiff's Exhibit 8 is the later release of that DC-4 drawing, that showed radiused corners.

Q. Did Mr. Welch ever ask you about using dipsticks in filling stations? A. Yes, he did.

Q. In what connection?

A. Well, some time after we had received the initial delivery of dipsticks from Mr. Welch, which would be some time after August 12th, 1948.

Q. Do you recall any of the discussion?

A. Yes. Mr. Welch came into my office—I don't know what his purpose of coming was, specifically; but during the course of his conversation with me he said that he had stopped that [717] morning at his gas station and had shown one of his dipsticks to the attendant and the gas station attendants asked him if he could make that type of dipstick for his fuel tanks underground, and he said, "Gene, what do you think about it?" I said, "Why, that would be very easy, but you couldn't use it in the same manner. You would have to put a plug in the bottom."

Q. Why couldn't you use it in the same manner?

A. Well, because the tanks in the ground—I happened to have run a gas station many years ago. Tanks in the ground are quite deep. A dipstick for an underground tank is ten to twelve feet long. You couldn't hold your finger that far out and read it very well unless you were some kind of a freak

(Testimony of Eugene L. Grindle.)

Q. I show you Exhibit R-1. Does the valve-controlled model dipstick appear in that drawing?

A. It is mentioned in this drawing, yes. It doesn't show any details of what it calls the valve-controlled model.

Q. Did you hear Mr. Welch's testimony that he had had this drawing made up?

A. Yes, I did.

Q. Would this indicate to you that this drawing was made up after he had a discussion with you on a valve control?

A. It certainly would.

Q. Do you notice the end plugs that are shown in the drawing?

A. Yes, I do. [718]

Q. What kind of end plugs do you think are shown in the drawing?

A. Undoubtedly it is, I would say—or it shows, rather, end plugs to be made up of laminated sections.

Q. How did you arrive at that conclusion?

A. Well, because the particular view in which the end plugs are called out is what is known in drawing procedure as an orthographic projection, and in an orthographic projection anything shown on a flat plane would not be shaded. The purpose of shading is to show an object which is viewed from some angular plane, not a flat plane. And even if this dipstick were to be drawn in this manner in some other plane, the vertical lines on the thing would not be shading, because they are in the wrong direction. As you can see on this same view, the round tubing in here, which is obviously a round

(Testimony of Eugene L. Grindle.)

piece, cannot be shown in the flat plane. He has shown shading on it in the lateral direction on this drawing. But any vertical lines on there could not be shading; they would have to be indicating laminations or something like that, or striping of some kind on the stick.

Q. Did you hear Mr. Welch testify about using laminations for making up end plugs?

A. Yes, I did.

Q. Did you hear him testify about using as many as eight laminations to make up the end plug? [719]

A. Yes, I did.

Q. Could he possibly have shown that number of laminations?

A. Well, he is showing approximately eight there; it looks as though it might be eight, if you want me to count them.

Q. Would this indicate to you that he had had this drawing made up after he had made laminated ends?

A. That would be a reasonable assumption to me.

Q. Are you familiar with some of the dipsticks that were introduced in evidence by the defendant?

A. Yes, I am. Practically seen all of them.

Q. Do you recall Mr. Welch's testimony in connection with the use of metal in dipsticks?

A. Yes, I do.

Q. Can metal be used in dipsticks?

A. Certain types of metal can, yes.

Q. What types?

A. Well, primarily non-ferrous types, aluminum



estimony of Eugene L. Grindle.)

a-ferrous metal. There wouldn't be any danger of  
arks from aluminum whatsoever, so aluminum  
uld be very satisfactory in a dipstick.

Q. Does the Welch patent application—or strike  
it.

Does the Welch patent specify any particular  
tal for the nails that are used?

A. No, it doesn't—just calls out nails.

Q. Were any of the dipsticks which you designed  
npensated [720] for column drop?

A. Yes, the first Boeing dipsticks that we or-  
ed were compensated for column drop.

Q. Did you convey this information to Mr.  
elch? A. I did.

Q. I hand you a chart. How did you convey that  
ormation to Mr. Welch?

A. Mr. Welch had been questioned about column  
op in this dipstick, and I recall him calling me  
om Dayton, Ohio, on the telephone, asking me  
out it. I said yes, there would be—could be a  
umn drop compensation and there should be, if  
i wanted to use the dipstick in some particular  
nner. And in explaining it further to him, I  
d that I would prepare column drop compensa-  
n for him and give it to him.

Q. Is it your opinion that Mr. Welch—strike  
it.

Did Mr. Welch have any knowledge about column  
op before you conveyed this information to him?

A. Not to my knowledge. He called me on the  
one from Dayton with some very fundamental

(Testimony of Eugene L. Grindle.)

questions regarding the dipstick. I was amazed some of the questions he was asking me about the thing.

Q. What dipsticks first incorporated the column drop?

A. The first one that Pan-American incorporated it in was the B-377. I don't know whether Mr. Welch put them in any other sticks before that or not. [721]

Q. What is shown on this chart?

A. This chart merely shows the amount that you would compensate the calibration or the amount that you would offset the calibration on the scale for each inch length of the scale.

Mr. Hohbach: I offer this as Plaintiff's next in order.

The Court: It will be received.

The Witness: I would like to say——

The Clerk: Plaintiff's Exhibit 38.

(Whereupon, column drop chart referred to above was received in evidence and marked Plaintiff's Exhibit No. 38.)

The Witness: Mr. Hohbach, if I may? I would like to say that this type of dipstick does not necessarily require column drop. We did not incorporate it in our first airplane, for a very specific reason. I had this column drop in a rough curve prior to the time that that curve was drawn, but there are two basic ways of using this type dipstick. One is to dip it in the tank with your finger over it, lift it

Testimony of Eugene L. Grindle.)

t of the tank and read it with the lower end  
ll submerged in the fuel, in which case you would  
t get a column drop, a full column drop. On the  
her hand, if you dip the stick in the fuel, place  
ur finger over it, completely remove the stick  
om the fuel, you will get the full column drop. Now,  
ecause in an air line you try to lean toward the con-  
ervative side, the conservative side in our long-  
nge operations, to insure [722] that you will have  
adequate amount of fuel aboard the airplane, if  
u had a compensated stick, that is, compensated  
r the column drop, and you put it in the tank and  
u read it without completely removing it from the  
el, you would get a reading that was too high.  
erefore, because people weren't familiar with this  
pe stick when we first started using it, we did  
t incorporate the column drop compensation, be-  
ase we didn't want anyone getting short-changed  
l fuel. Later on, because you couldn't always get  
extremely accurate readings as you wanted with-  
t the column drop, and because people had be-  
ne familiar with the stick, we did incorporate  
e column drop in there, and it made it that much  
ore accurate.

Q. Are you still employed by Pan-American?

A. Yes, I am.

Q. Do you care to reveal your present salary?

A. If you so wish.

Q. What is your present salary?

A. \$612.00 a month.

Q. Do you have any other sources of income?

A. I have another source of income, but I don't

(Testimony of Eugene L. Grindle.)

have any other income at the moment. I mean, expect, when my corporation starts doing better that I will be drawing income from it.

Q. At the present time you don't have any other income, is [723] that correct?

A. My corporation to date has shown a loss.

Mr. Hohbach: That is all.

### Cross-Examination

By Mr. Naylor:

Q. Mr. Grindle, you have directed your court of attention to this nail in the Welch patent?

A. Yes, I did.

Q. Now, you have read something that is there as to a characteristic of that nail, haven't you?

A. No, I haven't. I have only read that it does not specify that it would not be a ferrous metal.

Q. Oh, are you assuming that this must be written in the light of aeronautical regulations?

A. No, I am not, Mr. Naylor. I stated in reference to that, that if he ever put a nail in it, and I meant a ferrous nail, it could cause a spark—that no air line should use it, and Pan-American wouldn't use it.

Q. Now, have you ever heard of a non-ferrous nail? A. Non-ferrous nail?

Q. Yes.

A. We use aluminum nails ourselves, yes.

Q. Well, now, an aluminum nail on that structure would be perfectly satisfactory, would it not?

(Testimony of Eugene L. Grindle.)

A. Yes, it would, as far as the spark is concerned.

Q. And wouldn't you think a person of ordinary intelligence [724] who was once acquainted with aeronautical regulations would select an aluminum nail?

A. A person with ordinary intelligence?

Q. Yes.

A. That's a hard thing to describe, Mr. Naylor.

Q. Well, let us go a little further, then.

A. I mentioned there was another objection to putting a nail in the end, and that is because the difference of the coefficient of expansion and the surrounding plastic and the wood, you would undoubtedly end up with a leak very shortly.

Q. I would like to show you Defendant's Exhibit S-1.

A. This is very close to my heart, Mr. Naylor.

Q. It is? A. Yes.

Q. What is it?

A. It is a dipstick that was made by Lockheed Aircraft Corporation at the time when I was employed by them.

Q. I see. Now, what kind of metal is in the end of that structure?

A. Well, I happen to know that the end that is in this structure is brass, chromium plated, and when the dipstick was furnished by Lockheed it was protected with a rubber cap.

Q. It was?

A. Yes, it was. That dipstick, by the way, that

(Testimony of Eugene L. Grindle.)

you are just putting down there, Mr. Naylor, I believe was designed by [725] the Boeing Aircraft Company. We used them at Pan-American long before I went to Pan-American. They were used on our Boeing B-14 flying boats, which we ordered way back in the 1930s some time, and that particular dipstick was discarded as being impractical because it was an extremely costly job to maintain a seal in that valve.

Q. Yes. It does, however, show a valve, does it not?      A. Yes, it does.

Q. And so when you were discussing with Mr. Hohbach a moment ago this matter of Mr. Welch talking to you about putting a valve in a dipstick, you didn't want the court to believe you were the inventor of a valve in a dipstick, did you?

A. Oh, absolutely not. I was very familiar with this dipstick.

Q. Now——

A. But in a gas station, Mr. Naylor, they could tolerate a little maintenance if it wasn't going to be used too often. Also, I suggested the use of a slider type valve, which has a rubber or neophrene type seal on it. It would have been a much better seal than this. This is merely metal against plastic.

Q. Thank you. Now, I would ask you again to age date this. You say you are familiar with this as far back as when?

A. That particular type there, if that is the Constellation type stick, somebody else might have made one similar to it, [726] but in 1946 when the



(Testimony of Eugene L. Grindle.)

Lockheed 649's were first delivered to TWA, they had that type of dipstick.

Q. As far back as 1946? A. 1946.

Q. Thank you, sir.

Mr. Naylor: May I have Plaintiff's Exhibits 28, 29, and 30?

Q. (By Mr. Naylor): Mr. Grindle, did we understand you to say that AN-C 141 is a cement for concrete?

A. I have said that it was satisfactory. I have never actually used it in a dipstick myself.

Q. Now, originally on the vellum of the June 7th, 1948, drawing—

A. June 7th is the official date of that.

Q. All right, I will accept that date. On the June 7th drawing, one impression of which is here exhibited by Defendant's Exhibit P, you specify AN-C 141? A. That's correct.

Q. As a cement, did you not?

A. That's correct.

Q. And then eventually that drawing was amended to substitute acetate butyrate cement?

A. That's correct.

Q. Why?

A. Because that's the way Mr. Welch made the dipsticks, [727] and I changed the drawings so that they could be accepted. It was primarily as a favor to Mr. Welch.

Q. But you are not representing, are you, that AN-C 141 is a cement for cellulose acetate butyrate?

A. Mr. Naylor, I was familiar with AN-C 141

(Testimony of Eugene L. Grindle.)

since 1948. It was used in our shops then for cementing purposes and for filling purposes. It is used in our shops today under a different specification number, but it is the same basic material. And I was familiar with it, I had the specification, and I had materials on hand at Pan-American.

Q. Now I would like to ask you a couple of questions further about that. Lucite and flexi-glass are the acrilate base plastics, aren't they?

A. Yes, they are.

Q. And they are the ones which have been identified as being made by DuPont and Rhom & Haas?

A. Yes, they are both methyl methacriolate.

Q. Yes. Now, AN-C 141 on Plaintiff's Exhibit 30 is recommended for lucite and flexi-glass, isn't that a fact?

A. Yes, the specification that you are holding there is for the purpose of cementing flexi-glass or lucite.

Q. And that's shown on Plaintiff's Exhibit 28 is it not?

A. No, Plaintiff's Exhibit 28 is the Douglas Aircraft process standard.

Q. Beg your pardon. I meant to say 30. [728]

A. This copy I have isn't marked. Pardon me It is 29.

Q. Is it 29?

A. And 30 is an amendment to that. All right.

Q. All right, 28 and 29—or 29 and 30, rather?

A. 29 and 30.

Q. Now, actually AN-C 141 was not recom

(Testimony of Eugene L. Grindle.)

ended in any of this literature that you have proceeded here in court for butyl acetate, was it, or white?

A. It is primarily recommended here in this process specification for cementing of acrylate base elastics.

Q. Yes. And there's no reference there to the butyl acetate or white material, is there?

A. No, there isn't.

Q. Thank you. Now, under examination by Mr. Schbach, you referred to Defendant's Exhibit P, which was a print of the June 7th, 1948, drawing?

A. Yes.

Q. Did I understand you to say that there was all an earlier version of that drawing?

A. Earlier version of this drawing?

Q. Yes. A. Yes, there was.

Q. And is such fact indicated anywhere on defendant's Exhibit P?

A. No, there is not, but in my previous testimony I state [729] that I gave Mr. Welch a copy, advance copy of a drawing—of this drawing.

Q. Of Defendant's Exhibit P?

A. Yes; before it was finished.

Q. In advance of what?

A. In advance of the June 7th date.

Q. Well, now, would it also be in advance of the 4th? A. Not very probably, but possibly.

Q. Well, which would it be?

A. The drawing would have to be in some stage of completion for it to have been of any use to

(Testimony of Eugene L. Grindle.)

anyone, so I assume it would most probably be June 4th or thereafter.

Q. So the most advanced it could be was between June 7th and June 4th, is that correct?

A. Correct—three days.

Q. Three days. Now, the fact that there was an earlier depiction on this vellum or the vellum from which Defendant's Exhibit P was struck, is there any evidence on this particular print in any way?

A. It isn't, and it would not have been, because it was not an official release. It was an advanced copy to accommodate Mr. Welch.

Q. You do not note those changes prior to official release? A. No, sir.

Q. Now, you mentioned supplying Mr. Welch with certain charts [730] that were printed by a process of Pan-American? A. That's correct.

Q. Could you fix the time for this?

A. Not any closer than I already have. Some time after our order was placed with Mr. Welch.

Q. Do you know whether it was after the 4 sticks were delivered to you?

A. I feel quite sure in my mind it was before that he had not delivered a dipstick prior to that or I wouldn't have seen any need to give him charts.

Q. Do you know whether that was some assistance that you supplied him on a subsequent order of Pan-American?

A. The only subsequent order that I recall, Mr. Naylor, was for a Boeing dipstick, and would have been an entirely different chart.

testimony of Eugene L. Grindle.)

Q. Well, actually there were two orders, were there not? There was an initial order of a hundred and then a second order for a hundred?

A. Mr. Naylor, after the initial order is placed with Pan-American, I have no further connection with it. It then becomes a standard item and engineering is completely out of the picture.

Q. Well, you know from the testimony and exhibits here that there were two orders, don't you?

A. I don't know that, no. If it has been testified here, I [731] cannot confirm it, because I don't know.

Mr. Naylor: Excuse me, your Honor.

[I think that's all, your Honor.]

Mr. Hohbach: I have just one question, your Honor.

### Redirect Examination

Mr. Hohbach:

Q. Would you be able to bond together two pieces of tenite with AN-C 141 cement?

A. I feel that I would be able to, Mr. Hohbach, because I have successfully bonded tenite together with ethylene dichloride, which is a solvent used with AN-C 141 cement, and the fact that our shops have done it. But I have not done it in our shops myself, on other items. I would like to say, Mr. Naylor, in winding up, that as far as the AN-C 141 cement is concerned, I called that out on the drawing; as I had had some experience with it and I thought it would be satisfactory for the job. The

(Testimony of Eugene L. Grindle.)

dipsticks were to be assembled in our shops, and there had been any difficulty in using it in our shops, I would have been the first one to have heard about it and I would have found an alternative solution to it. If Mr. Welch had come to me and asked me what AN-C 141 was, I would have told him. I would have given him the specification. I would also have given him materials, because I was interested in seeing a successful dipstick made.

Q. Mr. Welch never asked you about——

A. He never did. [732]

Mr. Hohbach: That's all.

#### Recross-Examination

By Mr. Naylor:

Q. You say your salary is six hundred odd dollars a month? A. \$612.00

Q. And you have no other income?

A. That's correct.

Q. What about the two devices that you and your company have been manufacturing?

A. My corporation is showing a loss, Mr. Naylor, and I have been producing that device for some time. I have immediate prospects of possibility making some income from that.

Q. Are you receiving any assistance at all financially in the conduct of this case?

A. None whatsoever.

Q. What about this financial group you said you had down the peninsula?

A. What would you like to know about them?



(Testimony of Eugene L. Grindle.)

Q. Well, are they offering you any assistance?

A. They are not.

Q. Are they exercising any control over you in this litigation?

A. They are not.

Q. They have no part in this litigation?

A. I am the president of the corporation and they are major stockholders. That is the only connection they have. [733]

Mr. Naylor: I think that's all.

The Court: Both sides rest?

(Witness excused.)

Mr. Naylor: I have one exhibit I would like to recall Mr. Welch for. It is one of those that have been touched on here just a moment ago and it's merely to conclude that phase of the case, if I may have leave to call him. I will explain what it is: It's an exhibit that I eliminated in attempting to shorten up the examination of Mr. Welch. It is the Independent Pressroom statement of August 31, 1948, for engraving, printing and assembling the aviation gasoline measuring rods.

The Court: What is it, a bill?

Mr. Naylor: It is a bill for it.

The Court: May it go in by stipulation without the necessity of calling the witness? If you want to call him, it is all right with me.

Mr. Swain: I will stipulate that it is genuine, and what else do you want?

Mr. Naylor: That's all—just that that is the statement that was received.

The Court: It may be received in evidence.

Mr. Naylor: Thank you.

The Clerk: Defendant's Exhibit W-1 in evidence.

(Whereupon invoice referred to above was received in evidence and marked Defendant's Exhibit W-1.) [734]

Mr. Naylor: Excuse me, your Honor.

The Court: Now, with regard to the motion to file an amended and supplemental complaint, I think it falls perfectly within the purview of Rule 15 (B) of the Rules of Civil Procedure, and I am going to admit it. But with regard to the two motions you made, Mr. Naylor, I will dispose of them at the time I write the memorandum.

\* \* \*

[Endorsed]: Filed April 17, 1956. [735]

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[Title of District Court and Cause.]

**CERTIFICATE OF CLERK TO  
RECORD ON APPEAL**

I, C. W. Calbreath, Clerk of the United States District Court for the Northern District of California, hereby certify the foregoing and accompanying documents and exhibits, listed below, are the originals filed in this Court in the above-entitled case and constitute the record on appeal herein as designated by the attorneys for the defendant-appellant:

Excerpt from Docket Entries.  
Complaint.

Answer of Defendant.

Amended and Supplemental Complaint.

Motion of Defendant to Reopen Case and for  
Order Revoking Disclaimer.

Affidavit of C. Martin Welch in Support of Mo-  
tion to Reopen Case.

Affidavit of Francis J. Burke in Support to Mo-  
tion to Reopen Case.

Affidavits of Paul S. Stensen, John E. Davidson  
and Eugene L. Grindle in Opposition to Motion to  
Reopen Case.

Order Denying Motion to Reopen Case, etc.

Memorandum Order to Court on Validity of  
of Patent, etc.

Findings of Fact and Conclusions of Law.

Judgment and Decree.

Notice of Appeal by Defendant.

Appeal Bond.

Notice of Appeal by Plaintiff.

Appeal Bond.

Order Extending Time to Docket Record on Ap-  
peal to April 30, 1957.

Order Extending Time to Docket Record on Ap-  
peal to April 30, 1957.

Order Extending Time to Docket Record on Ap-  
peal to May 3, 1957.

Stipulation and Order Dismissing Appeal by  
Plaintiff.

Defendant's Designation of Record on Appeal.

Reporter's Transcript of Proceedings.

Plaintiff's Exhibits 1, 2, 3, 4, 5, 6, 7a, 7b, 7c,

8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31a, 31b, 31c, 32, 33, 34, 35, 36a, 36b, 36c, 37 and 38.

Defendant's Exhibits A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, A1, B1, C1, D1, E1, F1, G1, H1, I1, J1, K1, L1, M1, N1, O1, P1, Q1, R1, S1, T1, U1, V1 and W1. [736]

In Witness Whereof, I have hereunto set my hand and affixed the seal of said District Court this 2nd day of May, 1957.

C. W. CALBREATH,  
Clerk;

By /s/ MARGARET BLAIR,  
Deputy Clerk.

---

[Endorsed]: No. 15540. United States Court of Appeals for the Ninth Circuit. C. Martin Welch Doing Business as C. Martin Welch Co., Appellant vs. Eugene L. Grindle, Appellee. Transcript of Record. Appeal from the United States District Court for the Northern District of California Southern Division.

Filed May 2, 1957.

/s/ PAUL P. O'BRIEN,  
Clerk of the United States Court of Appeals for the Ninth Circuit.

In the United States Court of Appeals  
for the Ninth Circuit  
Case No. 15540

MARTIN WELCH,

Appellant.

vs.

EUGENE L. GRINDLE,

Appellee.

STATEMENT OF POINTS ON WHICH  
APPELLANT INTENDS TO RELY

Appellant Welch sets forth the following Statement of Points on which he intends to rely in connection with his appeal herein:

1. The District Court erred in finding that there existed between the parties a justiciable controversy for declaratory judgment within the meaning of 28 USC 2201.

2. The District Court erred in failing to find and conclude that Appellee Grindle's cause of action was a stale claim, barred by the applicable California Statute of Limitations.

3. The District Court erred in failing to find and conclude that Appellee Grindle, by virtue of a release or license, was estopped to maintain the asserted cause of action.

4. The District Court erred in denying Appellant Welch's Motion to Dismiss the asserted cause of action for declaratory judgment and in assuming

jurisdiction over the non-federal [739] question relating to the assignment of the patent and damages.

5. The District Court erred in adjudging Letters Patent 2,534,644 void because the application was not filed by the true inventor.

6. The District Court erred in adjudging Letters Patent 2,534,644 void because the dipstick disclosed in the patent was in public use for more than one year before the application was filed.

7. The District Court erred in denying Appellant's motion to reopen the case for the introduction of further evidence bearing on the asserted defense of prior public use of the invention forming the subject matter of Letters Patent 2,534,644.

8. The District Court erred in adjudging Letters Patent 2,534,644 void because the dipstick disclosed in the patent was published in drawing D-32,061, more than one year before the patent application was filed.

9. The District Court erred in adjudging that each of the three claims of patent No. 2,534,644 is invalid because it fails to define invention over the prior art, particularly Hyde and Schmidt.

10. The District Court erred in failing to adjudge Appellee Grindle guilty of laches and to dismiss the action for that reason.

11. The District Court erred in failing to find that Appellee Grindle had acquiesced in Appellant's



Welch's manufacture and sale of the subject devices in a manner and to an extent that barred the maintenance of the action and to dismiss the suit for that reason.

2. The District Court erred in failing to treat the suit as one based upon a stale claim the prosecution of which gave rise to circumstances meriting an award of reasonable attorneys' fees and in failing to make such an award. [740]

3. The District Court erred in ordering Appellant Welch to discontinue the marking of the subject devices with Pat. No. 2,534,644 and to notify customers and prospective customers that the subject devices were not patented.

Dated: May 7, 1957.

NAYLOR & NEAL,  
JAS. M. NAYLOR,  
FRANK A. NEAL,

By /s/ JAS. M. NAYLOR,  
Attorneys for Appellant  
Welch.

Service of Copy Acknowledged.

Endorsed]: Filed May 10, 1957.

No. 15540

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United States  
Court of Appeals  
for the Ninth Circuit

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C. MARTIN WELCH,

Appellant.

vs.

EUGENE L. GRINDLE,

Appellee.

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Transcript of Record  
(In Three Volumes)

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Volume III  
Book of Exhibits  
(Pages 717 to 727)

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Appeal from the United States District Court for the  
Northern District of California,  
Southern Division.

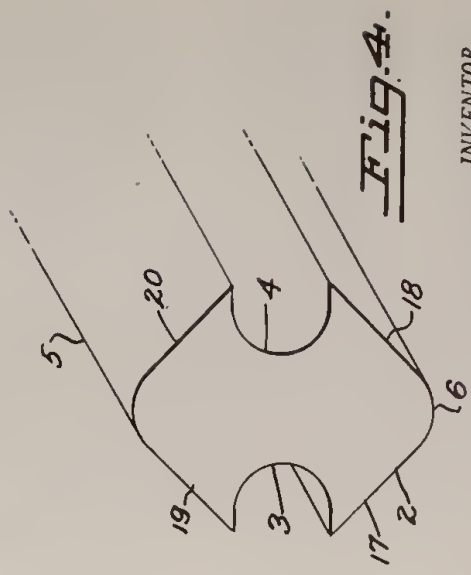
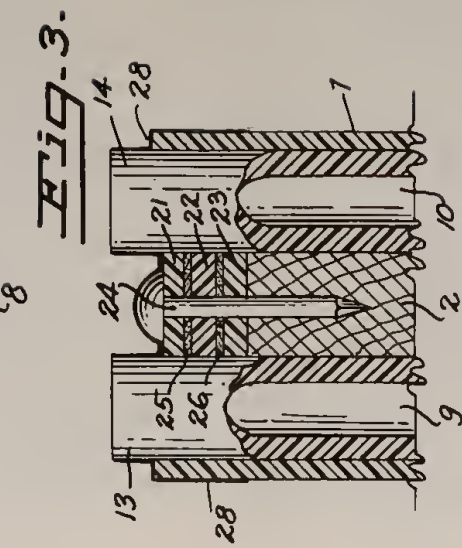
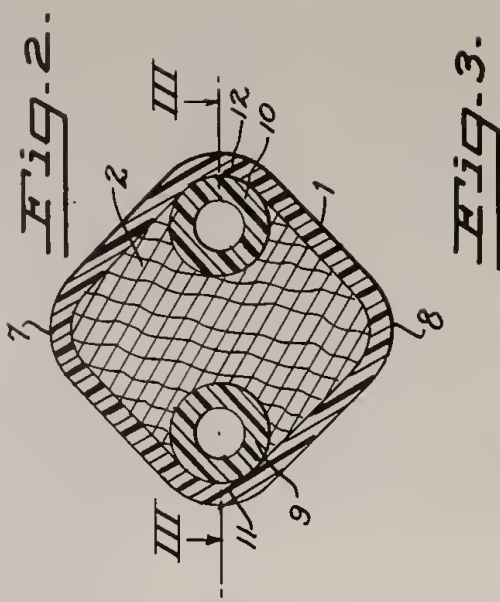
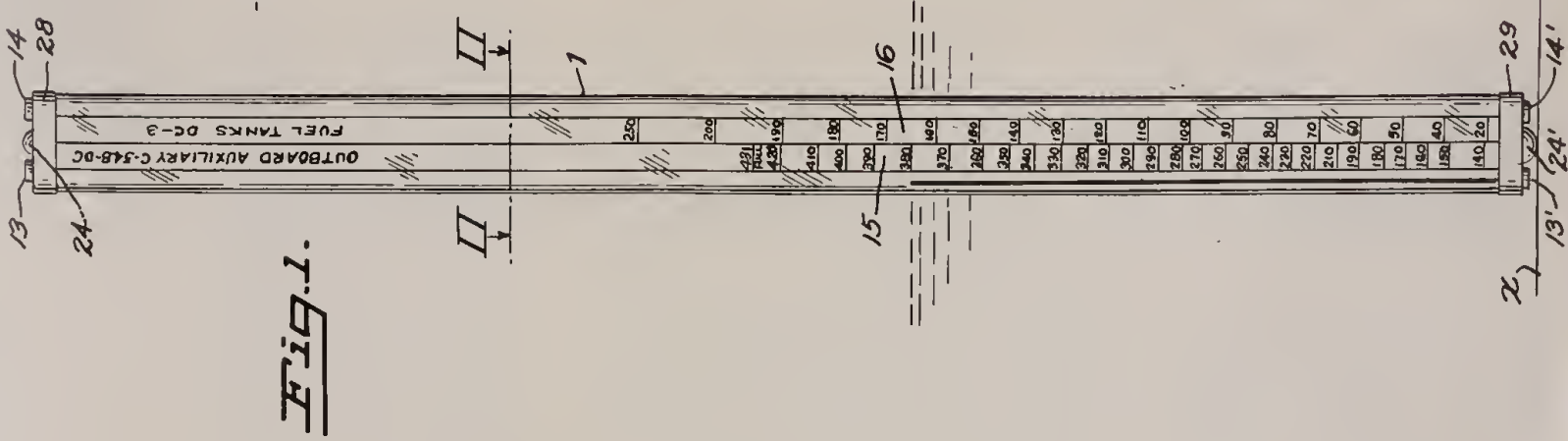
FILED

JUL 18 1957

Dec. 19, 1950

C. M. WELCH  
LIQUID MEASURING GAUGE  
Filed Aug. 17, 1949

2,534,644



INVENTOR.  
CYRIL M. WELCH  
BY *Baldwin Tele*  
ATTORNEY.

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# UNITED STATES PATENT OFFICE

2,534,644

## LIQUID MEASURING GAUGE

Cyril M. Welch, Milbrae, Calif.

Application August 17, 1949, Serial No. 110,711

3 Claims. (Cl. 33--126.4)

1

This invention is particularly designed and constructed to meet the exacting requirements of fuel tank gauging in airplane service, and broadly stated resides in the particular structure and mode of fabricating the gauge assembly.

Among the objects of the invention is the provision of a fuel gauge comprising a hydrostatic measuring tube open at both ends and combined with a reinforced transparent tubular body having graduated graphic scales associated with the measuring tubes and visible through the body, with the opposite ends of the body hermetically sealed around the protruding ends of the measuring tubes.

Another object is to so combine the various elements of the structure that it will withstand the severe shocks and stresses to which it is subjected in the field practice of measuring the fuel in airplane fuel tanks, such as being accidentally dropped from considerable heights, run over by landing gear and truck wheels and abusive handling by careless operators.

A further object is to maintain the accurate adjustment of the graduated scales relative to the measuring tubes and to protect it against abrasion, soiling and surface injury.

Other objects and advantages will appear as the description proceeds. In the specification and the accompanying drawings the invention is disclosed in a specialized form. But it is to be understood that it may be embodied in other forms within the spirit of the invention as defined in the claims following the description.

In the one sheet of drawings:

Fig. 1 is a front elevation of a dual measuring gauge constructed in accordance with this invention.

Fig. 2 is an enlarged detail of the same in cross section on the line II--II Fig. 1.

Fig. 3 is a similar detail in vertical section on the line III--III Fig. 2.

Fig. 4 is an enlarged detail in isometrical perspective of the end portion of the reinforcing bar.

In detail the structure shown in Fig. 3 comprises the square tubular body 1, preferably of transparent plastic such as butyrate.

The square reinforcing bar 2, preferably of Port Orford cedar or other suitable material combining strength with lightness and freedom from warpage. This bar has the opposed longitudinal grooves 3, 4 extending its full length. The remaining corners 5, 6 are rounded to snugly fit within the rounded corners 7, 8 of the tubular body 1.

The pair of measuring tubes 9, 10 fit snugly

2

within the grooves 3, 4 and the rounded corners 11, 12 of the body 1 with their upper and lower ends 13, 14 and 13', 14' protruding beyond the length of the body tube 1. These tubes 9, 10 are forced into position and tend to wedge the assembly tightly within the body 1.

These measuring tubes 9, 10 function independently of each other relative to their respective calibrated scales 15, 16 which are cemented to the adjacent planes 17, 18 of the reinforcing bar 2 respectively. Similar graduated scales are cemented to the opposed planes 19, 20 to read with their respective tubes 9, 10 on the opposite side of the body 1. This enables the use of four scales 15 with the two tubes.

After the measuring tubes and reinforcing bar are assembled within the tubular body 1, as in Fig. 2, the ends of the body extending beyond the length of the bar 2 are filled and hermetically sealed by laminated plugs such as shown in Fig. 3. These plugs are composed of the superimposed laminations 21, 22, 23 die cut from sheet plastic to the outline of the end of the bar 2, with a central hole for the round headed nails. The heavy plastic cement layers 25, 26 are interposed between the laminations in sufficient quantity to exude beyond the marginal edges of the laminations. The laminated plugs are then inserted into the opposite ends of the body 1, and the nails 24, 24' are driven into the opposite ends of the reinforcing bar 2. This compresses the laminated plugs so that the cement layers 25, 26 are forced outwardly against the inner surfaces of the body ends and around the tubes 9, 10 and into the intervening interstices. This hermetically seals the tube ends against entrance of the tank fuel when the gauge is immersed therein.

As a further precaution in sealing the ends of the gauge they are immersed in a plastic solution 28, 29 up to about the height of the end plugs. This solution which is preferably of a distinctive color coats the body ends with a lacquer coating which will completely seal the texture and interstices of the plugs and the body ends 29, 29 to which they adhere, and conceal the unsightliness of the laminated plugs.

The invention operates substantially as follows: The operator grasps the upper portion of the gauge and lowers the lower end 29 into the fuel tank until it touches the bottom X. With the gauge approximately vertical the fuel enters the lower ends 13' and 14' of the measuring tubes 9 and 10 up to the top level of the fuel within the tank. The operator then presses his bare thumb or finger over the top of the selected

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secure by Lettens Patent is:

Having fully described this invention and its mode of operation what I claim and desire to

No references cited.

CYRIL M. WELCH.

plugs when said nails are driven into the op-

45

from the present objects of this invention.

The octane values of the various gasoline fuels are distinguished by color tints introduced into the fuels by the producer. These colors such as green for 90 octane and red for 130 octane, clearly define the height of the column in the selected transparent measuring tube.

35

indicated in the lower content of the tube.

The body 1, tubes 9, 10, and the laminated plugs are preferably composed of butyrate plastic material which may be bonded and cemented together by amyl acetate as a solvent assuring proper chemical reactions to that end. However there are equivalent substitutions that may be available in the plastic art without departing

of the gauge is the maximum of strength with a minimum of weight, the clear visibility of the graduated scales protected behind the transparent walls of the tube 1, the laminated structure and manner of cementing the end plugs into the tube 1 preventing separation of the various parts of the assembly and the nail head 25 frees the lower ends 13' and 14' of the tubes from clogging by sedimentary deposits upon the bottom X of the tank, the presence of which is indicated in the lower content of the tube.

25

ent combinative functioning.

The four graduated scales on the four planes

20

11-20 of the reinforcing bar 2 are each designated for a different fuel tank to be selectively measured as above described.

The particular merit of the present structure

of the gauge is the maximum of strength with

a minimum of weight, the clear visibility of the

graduated scales protected behind the trans-

parent walls of the tube 1, the laminated struc-

ture and manner of cementing the end plugs into

the tube 1 preventing separation of the various

parts of the assembly and the nail head 25 frees

the lower ends 13' and 14' of the tubes from

clogging by sedimentary deposits upon the bot-

tom X of the tank, the presence of which is

indicated in the lower content of the tube.

The body 1, tubes 9, 10, and the laminated

plugs are preferably composed of butyrate plastic

material which may be bonded and cemented

together by amyl acetate as a solvent assuring

proper chemical reactions to that end. However

there are equivalent substitutions that may be

available in the plastic art without departing

from the present objects of this invention.

The octane values of the various gasoline fuels

are distinguished by color tints introduced into

the fuels by the producer. These colors such

as green for 90 octane and red for 130 octane,

clearly define the height of the column in the

selected transparent measuring tube.

Having fully described this invention and its

mode of operation what I claim and desire to

secure by Lettens Patent is:

secure by Lettens Patent is:

PLAINTIFF'S EXHIBIT No. 12

Pan American World Airways System  
Pacific-Alaska Division, San Francisco 19, California

June 10, 1948.

Plastic Process Company, Inc.,  
55 New Montgomery Street,  
San Francisco 5, California.

Attention: Mr. C. M. Welch

Gentlemen:

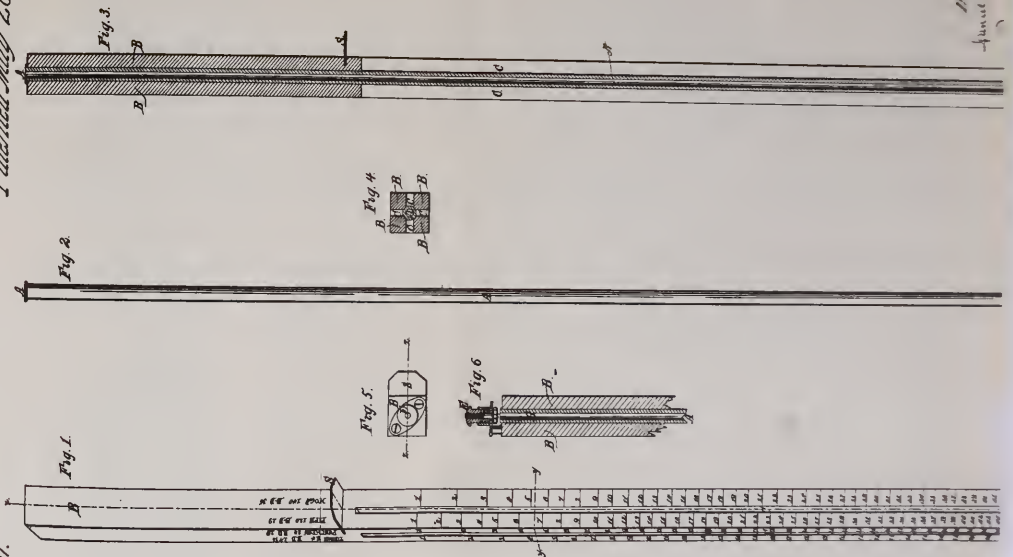
Enclosed please find three copies of our drawing number D32.061.114 on "Fuel Tank Dip Stick Assembly". Our purchase order will be issued for 100 units, based on your quotation dated June 6, 1948, with reservations for re-ordering replacement quantities and possible supply quantities for our other Divisions.

We have altered the design of these sticks, from the original sample, to incorporate solid plastic blocks in each end for additional strength. We are assuming that this change will not increase the cost by more than twenty-five cents per unit. Please advise if any further price adjustment will be necessary.

The graduation chart original, from which you should make the printed reproduction, is being sent to you under separate cover to avoid damage in mailing.

This liquid column type dip stick was developed

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Patented May 19, 1936

1898221

Cast Case

Fig. 1

720

to satisfy our needs for an accurately calibrated, durable airplane fuel quantity measuring device which can be read easily under all operating conditions. In testing the durability of the sample stick, we threw it to the concrete hanger floor from a height of twenty feet with full force, to obtain an accelerated service test of repeated dropping from the airplane wing. After the ninth time it cracked the end, therefore, although it far exceeded our expectations, we have incorporated solid plastic blocks in the end to make it even more durable. The cellulose acetate butyrate plastic sticks will undoubtedly far exceed the durability of the wooden sticks now used by us and most airline operators, due to its high resistance to impact, abrasion, hydrocarbons and discoloration.

There should be a demand for this plastic stick among other operators and merely by changing the calibration slip, it could be adapted to aircraft types other than the DC-4.

This letter will constitute release of the design to you to market as you see fit.

Very truly yours,

PAN AMERICAN AIRWAYS,  
Inc.,

/s/ J. J. WELSHNER,

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DANIEL C. HYDE, OF NEW YORK, N. Y.

## IMPROVEMENT IN GAGING-RODS FOR LIQUOR-CASKS.

Specification forming part of Letters Patent No. 38,681, dated May 26, 1863.

*To all whom it may concern:*

Be it known that I, DANIEL C. HYDE, of the city, county, and State of New York, have invented a new and useful improvement in "wantage" or gaging-rods for determining the liquid contents of casks; and I do hereby declare that the following is a clear and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

Figure 1 is a perspective view of one of my improved wantage or gage rods; Fig. 2, a view of the transparent indicating-tube, constituting the main feature of my invention; Fig. 3, a longitudinal section in the line *xx* of Fig. 1. Fig. 4 is a transverse section of my instrument in the line *yy* of Fig. 1; Fig. 5, a top or end view of my improved gaging-rod when fitted with a spring-valve; and Fig. 6 a partial section in the line *zz* of Fig. 5, showing more clearly the details and arrangement of the top valve and spring.

My invention is designed to ascertain either the wantage in a cask or package of liquid, or the amount of fluid contained therein, with more certainty, ease, and accuracy than can be done with the instruments heretofore used for this purpose. Its principal feature consists of an indicating tube or cylinder, A, Figs. 2 and 1, made of transparent glass, or its equivalent, and left open at either end. By immersing such a tube in any liquid the fluid particles will immediately rise therein to the height of their proper level. If, however, the upper end or orifice of the tube be hermetically closed before it is withdrawn from the liquid the simple pressure of the atmosphere will prevent so much as is contained in the tube from escaping upon its emersion therefrom and retain it confined in a fixed position therein, so long as the tube is kept in a vertical position, or until the orifice be reopened. It is evident that the height of the column of liquid thus confined in the tube will indicate the depth of its previous immersion in the body of the fluid, and by comparing this column with a properly-graduated scale the quantity of liquid in any given cask or vessel can be accurately ascertained almost at a glance.

In manufacturing my improved wantage and gaging rods for ordinary purposes I inclose the entire length of the indicating-tube A within the center of a square slitted rod, B, Fig. 1,

made of wood, metal, gutta-percha, or any other suitable material, so that either end of the rod shall be flush with the ends of the inclosed tube. Suitable gaging-scales are laid or marked off upon the four sides or faces of this square rod, each adapted to a particular form or size of cask, designated at the top of the scale by letters and figures denoting, first, its capacity, and, next, its bung diameter.

The graduation of my improved instrument is similar to that found upon the gaging-rods now in use, and to insure accuracy is made thereon by a graduating-machine. Central slits, C C, Figs. 1 and 4, are cut through the rod at right angles with each other, and extend up from its foot to the initial point of the scales marked upon its sides, the lower end of the rod being bound with a suitable metallic ferrule, D, Fig. 1. The indicating-tube A is inserted and secured within a longitudinal aperture formed in the center of the rod at the intersection of these open slits C C, as shown in the cross-section, Fig. 4, and is visible through the same upon each of the graduated faces of the bar or rod.

The indicating-tube A in my improved wantage or gaging rod may be closed hermetically at pleasure by the simple pressure of the finger upon its upper end, which is finished off evenly for the purpose, as illustrated in Figs. 1 and 3 of the accompanying drawings; but, to perfect the instrument, I intend to secure upon the top end of the rod B a simple, spring-actuated valve, O, Fig. 6, made of rubber or other elastic material, for the purpose of closing tightly the orifice of the tube, as shown in Figs. 5 and 6. In this valve arrangement the resistance of the spiral valve-spring is overcome and the valve O closed down as a cushion upon the end of the tube by simple pressure upon the head or button E, Figs. 6 and 5.

In ascertaining the wantage in any given cask my improved wantage rod is inserted therein through its bung-hole until a suitable stop, S, Figs. 1 and 3, projecting from one side of the rod in a proper position with reference to the graduated scale thereon, will catch under the bung-stave. The orifice at the upper end of the indicating-tube is then closed by pressure of the finger thereon, either directly, as in the rod, Fig. 1, or through a valve, E O, as in Fig. 6, and the instrument withdrawn. The height of the column of liquid retained

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In presence of—  
JOHN H. CONKLIN,  
GEORGE N. CONKLIN,  
D. C. HYDE.

This specification of my improvement in  
wantage and gaging rods signed by me this  
14th day of March, A. D. 1863.

What I claim as my invention, and desire  
to secure by Letters Patent, is—  
1. The combination and arrangement of a  
transparent indicating-tube, with any suitably-  
graduated scale or series of scales, for the pur-  
pose of ascertaining and measuring the liquid  
contents of casks or other vessels, substan-  
tially as herein set forth.  
2. The combination of a suitable valve, O,  
or its equivalent, with the end of a transpar-  
ent indicating-tube, A, substantially as and  
for the purpose herein set forth.

Although I prefer to protect and arrange  
the indicating-tube A in the manner herein  
described, I do not limit my claim to the par-  
ticular form of rod here given. The tube may  
be protected and combined with the necessary  
scales and the rod manufactured in many dif-  
ferent forms or styles. In fact, my improved  
gaging-rod may be made wholly of glass or  
other transparent material with graduated  
scales marked directly thereon. Hence,

in the transparent tube will, by reference to  
the scale graduated for a cask of the capacity  
given, suffice to determine the number of gal-  
lons wanting therein. Upon releasing the  
valve or removing the finger from the orifice  
of the tube its contents will at once flow out.  
By the same process either the contents or  
“ullage” of a cask may also be accurately ob-  
tained.

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Endorsed: Filed March 1, 1906.

E. SCHMITT.

OUTGAUGE.

APPLICATION FILED APR. 1, 1920.

1,423,156.

Patented July 18, 1922.

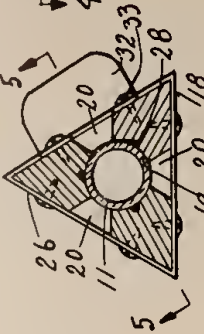
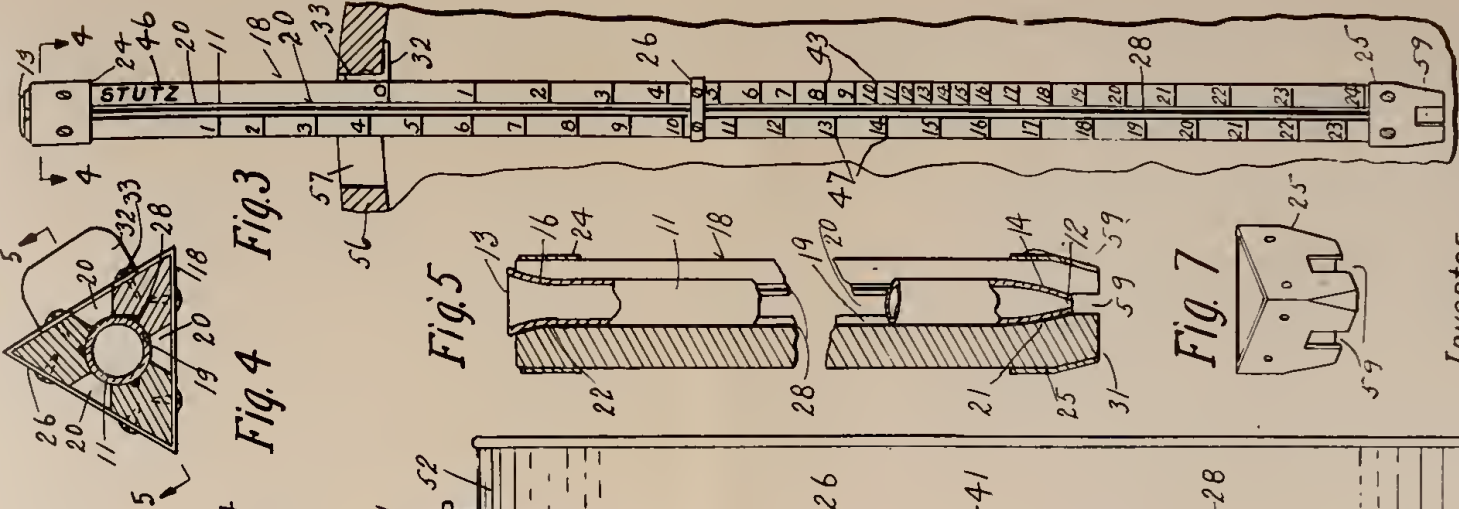
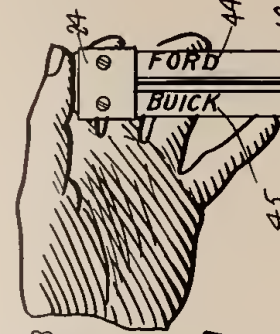
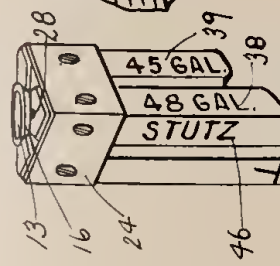


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1,423,156.

Specification of Letters Patent.

Patented July 18, 1922.

Application filed April 1, 1920. Serial No. 370,518.

To all whom it may concern:

Be it known that I, EUGENE SCHMITT, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Outgauges, of which the following is a specification.

It is the object of my invention to provide a new and improved device whereby to conveniently and accurately measure without calculation the quantity of liquid which is lacking to fill a container to standard or desired extent, and to indicate the quantity of liquid which it is necessary to supply in the container in order to fill the same.

My invention is applicable in measuring the quantity of gasoline required to fill the gasoline tanks of automobiles, or to indicate the shortage in barrels containing liquid commodities, such as vinegar, alcohol, or other liquids.

It is the object of my invention further to provide a measuring tube with means which are emphasized by the presence of the liquid in the tube to readily indicate the presence and height of the liquid in the tube; further, to provide an outgauge of the character mentioned with a plurality of contacts to form the points from which the calculations for outage in the container are made; and, further, to provide an outgauge with a plurality of graduations respectively extending between said contacts and extending to both sides of one of said contacts lengthwise of the tube.

The invention will be further readily understood from the following description and claims, and from the drawing, in which latter:

Fig. 1 is a perspective view of an outgauge partly broken away, showing my invention.

Fig. 2 is a side elevation of my improved device partly broken away, showing its employment in measuring the outgauge in a gasoline tank of an automobile, the tank being partly broken away.

Fig. 3 is a side elevation of my improved device showing its employment in measuring the outage in a barrel by employment of its upper contact.

Fig. 4 is a cross-section of my improved device taken on the line 4—4 of Fig. 3.

Fig. 5 is a longitudinal axial section of my improved device taken in the plane of the line 5—5 of Fig. 4, and partly broken away.

Fig. 6 is a detail in side elevation showing the measuring tube and its support, partly broken away, and indicating the level of liquid in the tube emphasizing the indicating mark to show the presence and height of the liquid; and.

Fig. 7 is a perspective view of the lower ferrule of my improved device.

My improved outgauge comprises a tube 11, which is preferably transparent and made of glass. Its lower end is provided with an opening 12, and its upper end with an opening 13. The lower end preferably tapers, as shown at 14, toward the opening 12, in order to constrict the opening and make it of smaller cross-section than the cross-section of the tube proper, whereby to readily retain the liquid in the tube when the upper opening is closed. The upper end of the tube preferably is tapered outwardly, as shown at 16, for enlarging the upper opening, so that its cross-section is of greater area than the cross-section of the tube proper.

The tube is provided with a support, exemplified at 18, the support having a groove 19 extending lengthwise thereof for receiving the tube. I have shown three of these supports as members of an integral support arranged about the tube, and having lengthwise spaces between them, forming viewing slots 20, so that the tube may be viewed through these spaces to expose the liquid and the height of liquid in the tube.

The lower end of the support is provided with an inwardly extending seat 21, which coacts with the lower tapering end of the tube, and the upper end of the tube is provided with an outwardly extending seat 22 which coacts with the upper spreading end of the tube. The seats position the tube lengthwise. The members of the support are preferably connected, the connections being shown as consisting of an upper band 24, a lower ferrule 25, and an intermediate band 26, suitably secured to the members of the support, as by screws.

Means are provided which are arranged to be emphasized or magnified by the liquid in the tube. I have shown these means as comprising a mark 28, extending lengthwise of the tube, and so arranged that the mark may be viewed through the tube. This mark is preferably of different color from the color of the portion of the support seen through the tube, being for instance a black

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